a C. C. Smith publication

FIFTY CENTS

Textile Industries

Formerly "COTTON"

JUNE, 1958

TUFTED TEXTILES - - 1958
42-page section begins on page 99

Canton grinds card bends
page 83

How to keep downtime costs low
page 90

Automatic wool blending system
page 93

Controlling quality in weaving
page 97

"We automated our bleachery"
page 143

How much opening?
page 145

Jacquard designing
page 159

Knitting section
pages 177-188

Complete list of ...s
...4

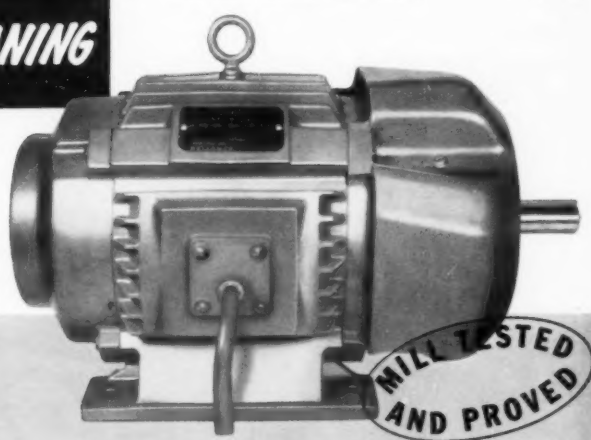
University Microfilms
313 No First St
Ann Arbor Mich 4

NO
MORE
MOTOR
CLEANING

The *new* Reliance Lint-Proof Textile Motor is totally enclosed, positively eliminating lint-clogging. Lint-filled air cannot penetrate the sealed motor housing, and the high velocity cooling fan blasts lint off the outside of the motor.

It will pay you to try these new textile motors and see how they cut operating costs by eliminating motor cleaning.

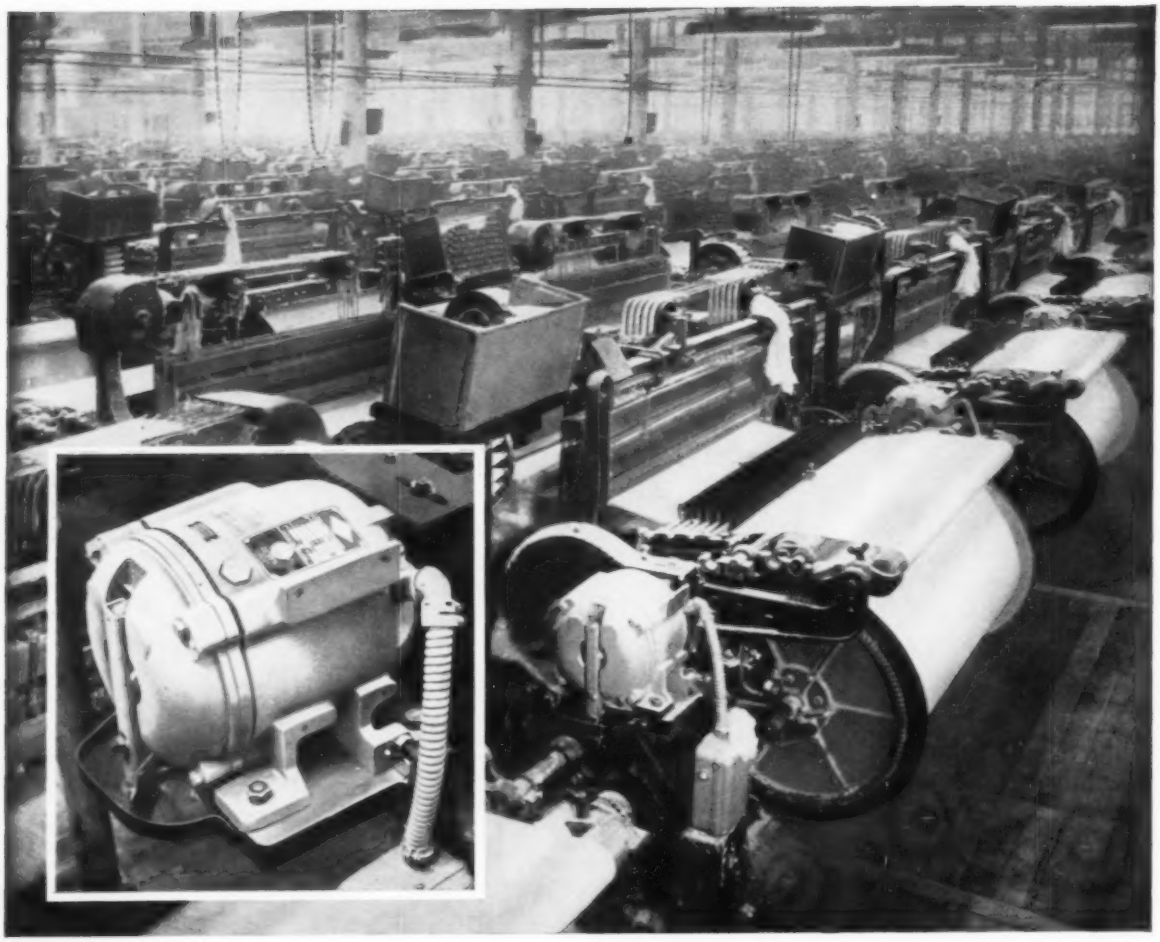
Now available—1-20 hp. general purpose, air-cooled textile motor for application on spinning, roving, drawing, and twisting frames . . . and on cards, openers, pickers, and other textile machines. B-1508-A



IT'S LINT-PROOF

RELIANCE Totally Protected MOTORS

RELIANCE ELECTRIC AND ENGINEERING CO.
DEPT. 204A, CLEVELAND 17, OHIO • OFFICES IN PRINCIPAL CITIES
Canadian Division: Welland, Ontario



AT CONE MILLS

• • • • • • • •

DIEHL transmitters improve product quality

Three hundred Draper looms powered by the latest type DIEHL Power Transmitters were recently installed as part of an important new modernization program at Cone Mills Corporation's Minneola Plant, Gibsonville, N. C., with most satisfactory results in the improvement of loom performance and product quality.

DIEHL Power Transmitters were developed especially for Draper looms, and feature a fast, positive clutch-brake mechanism combined with an inverted type motor which provides high inertia without need for a separate flywheel. This design produces a constant steady pull for more efficient weaving and better quality greige goods, in the opinion of a plant official. "Increased efficiency of looms will be joined by lower operating costs because of the combination of Draper X2 looms and DIEHL Transmitters," he said. The looms now run at 186 picks per minute.

Cone Mills plant officials are favorably impressed with the positive action of the clutch-brake mechanism, the pinion driving shaft construction which eliminates the thrust bearing on the loom, the speed and ease of removal and replacement of the transmitter for inspection and servicing, the totally enclosed housing design which protects against weave room lint and fly, and the negligible maintenance and down-time costs.

DIEHL Power Transmitters can increase production and efficiency—at lower operating costs and less down-time—in your mill. Specify them for your looms.

Diehl

DIEHL MANUFACTURING COMPANY
Electrical Division of
THE SINGER MANUFACTURING COMPANY
Finderne Plant, SOMERVILLE, N. J.

☐ Please send me Consolidated Motor Catalog and Price List No. TI-6 3540

☐ Please send me Textile Motor Bulletin No. TI-6 3526

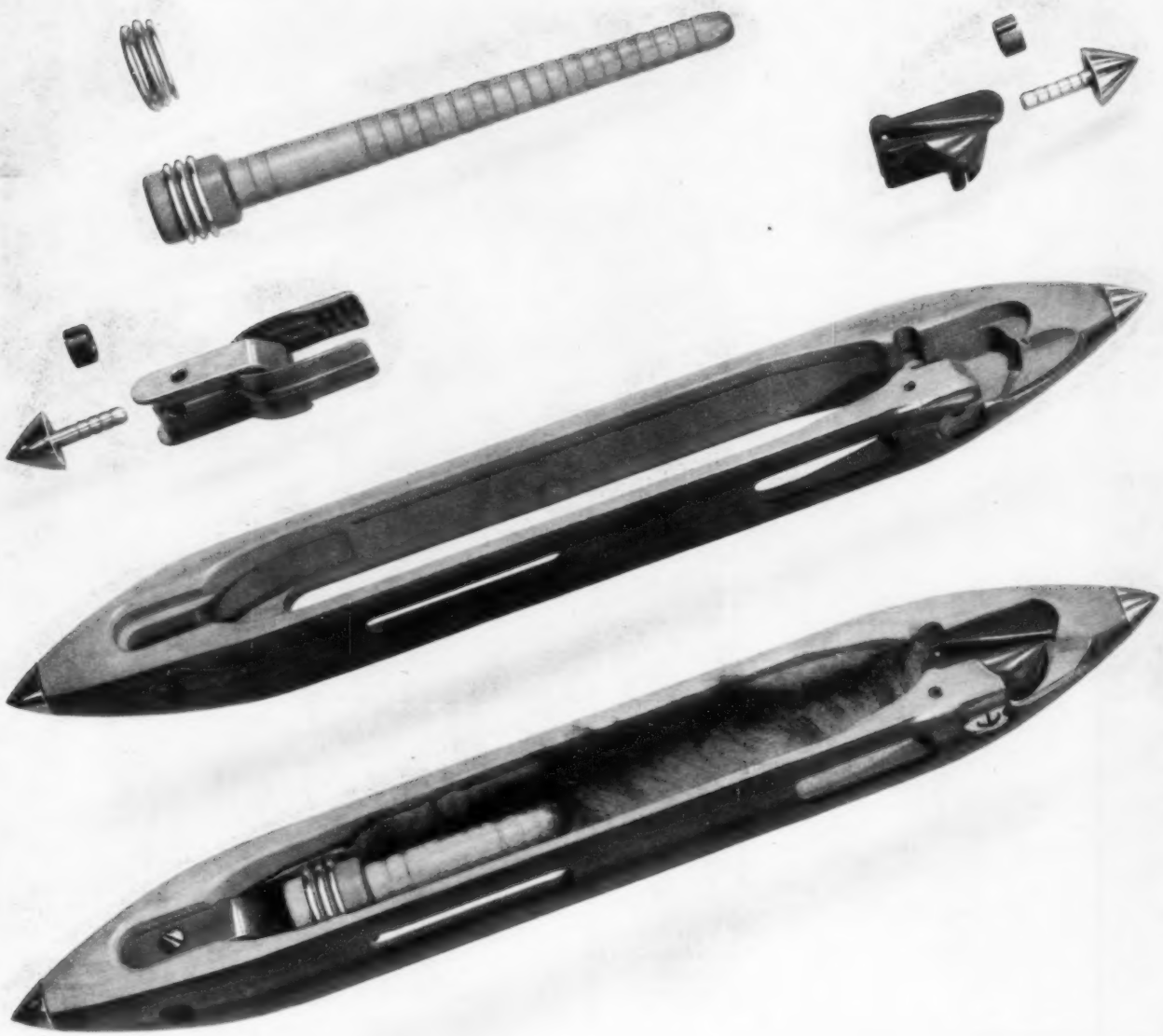
NAME _____

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

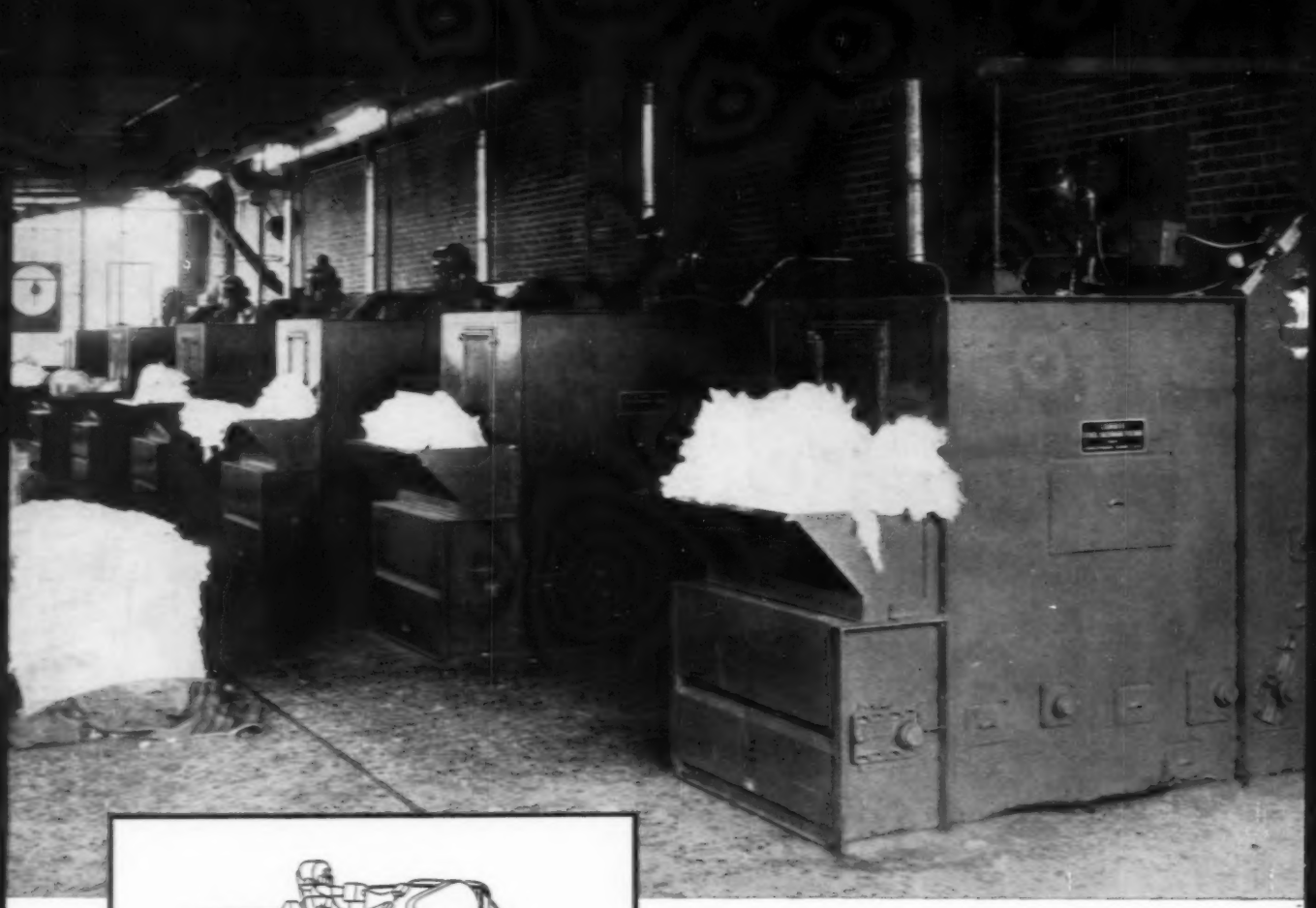
Baltimore • Chamblee, Ga. • Charlotte • Chicago • Cincinnati • Los Angeles • Milwaukee • Needham, Mass. • New York • Philadelphia • Syracuse

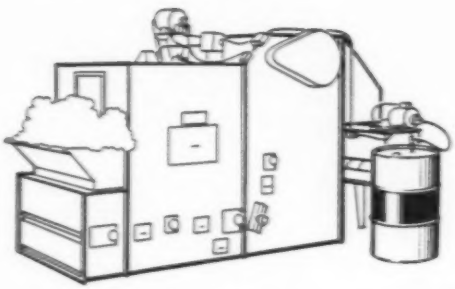


PLANNED QUALITY! Quality doesn't just happen at Draper . . . it is the result of careful planning and engineering. Each part, regardless of size, shape, or material, is designed to do a specific job in the best possible manner. New parts, *as illustrated above*, are constantly being developed to increase your mill efficiency and profits. *See your Draper representative today* for cost-saving parts and mechanisms.

DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N.C. • SPARTANBURG, S.C.





TEXACO TEXSPRAY COMPOUND is applied automatically to the fibres at whatever point is most convenient — usually in the opening room. Here at International Shoe Co., where they make shoe lining cloth, *Texspray* has cut dust and fly by 95%.

Here's where Texspray cuts down dust and fly by 95%

"We run about 18,000 pounds of cotton every 21 hours here at International Shoe Co.," reports Manager H. M. Jackson. "But the blending of two grades of cotton created an acute dust and fly problem. So we called in a Texaco Lubrication Engineer. The picture shows the results: no more fly or dust, and a mill that's literally 95% cleaner. The mill operators are the happiest people you ever saw."

Condition your fibre with *Texaco Texspray Compound* and you can count on stronger yarn with fewer ends down, more uniform count – less static and fewer "eyebrows." These unbeatable advantages have made *Texspray* the leading cotton conditioner for 20 years.

Ask a Texaco Lubrication Engineer to help you cut down dust and fly and to get better performance from all your equipment. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

(PARTS, INVENTORY, PRODUCTION, DOWNTIME, MAINTENANCE)

NBP BPA

Textile Industries

Formerly "COTTON"

Vol. 122, No. 6
JUNE, 1958

CONTENTS

Copyright 1958 by W. R. C. Smith Publishing Co.

Major articles digested for quick reading on page 4

Tufted Textiles—1958

Operation Centerline 101
March of the Tufteds 104
Call the Plays Electrically 106
Carpet with a Bounce 110
Why Not Print Your Tufted Carpets? 117
Tufteds Up in Value 128

Cotton

They Conquered the Bends (Cotton Carding) 83
Overwaxing Gives Cleaner Looms, Fewer Stops 86
Controlling Quality in Weaving Department 97
Poster 23—Roving pieces on umbrella creel 139
Breaking Bottlenecks in Spinning 145
Save Time in Measuring Cotton Fiber Length 147
How Much Opening? 150
Georgia Carding-Spinning Discussion 157
How to Run Cavitomic Cotton (STA Meet) 165
Another Idea on Package Size 167
What Is Life of Card Clothing? 169
Discussion on the Spinner's Job 171
Brush Cleans Warper Creel Bottoms 173

Wool

Automation in a Carpet Mill 93
Laboratory Fulling Mill Flexible and Accurate 98
Wool Evaluation and Discoloration Studied 156

Knitting

Knit Stretch Yarns Loosely 179
More Hosiery Promotion Needed (NAHM Meet) 181
Tips on Welt Turners 184
Knitting Industry Machine Data 187
Knitter Hints No. 48—Pulled Threads 188
Fights Belt Static with Water 174

Synthetics

159 Technique of Jacquard Designing
169 How Do I Keep my Rayon Staples Separate?
173 Solid Card Screens?

Wet Processing

88 How to Dry Large Packages
143 "We Automated Our Bleachery"
154 They Keep Awning Quality Headed Up

General and Technical

85 Engineer's Approach to Quality Control
89 12 Standards for Textiles
90 Preventive Maintenance Keeps Downtime Low
92 Neucleonics in Textiles Discussed at Clemson
95 Use a Camera to Stimulate Safety Program
142 Poster 24—Mixed Yarn in Twister Creel
148 Georgia Weaves a New Educational Fabric
159 Technique of Jacquard Designing
169 How to Make Beams Run Out Evenly
173 Numbering System Flexible
173 Locating Towel Holders
175 Laying Wooden Floors Over Concrete

Departments

6 Shorts and Remnants
28 Personal Notes About Men You Know
67 News in Brief
77 An Executive Views the News in Textiles
81 Future Events
167 How Other Men Manage
193 New Product Parade
211 Helpful Booklets Free
229 What the Textile Mills Are Doing
233 Suppliers News

EDITORIAL AND EXECUTIVE OFFICES: 806 Peachtree St., N. E., Atlanta 8, Georgia

George H. Dockray, Editor

J. Frank Guest, Managing Editor

Milton C. May, Associate Editor, P. O. Box 11815, Charlotte 9, N. C.

Stanley M. Suchecki, Associate Editor, P. O. Box 121, New Canaan, Conn.

Jesse W. Ellington, Associate Editor

Dorothy D. Eudy, Assistant Editor

J. A. Moody, Production Manager

H. Redfern Hollins, Director of Circulation

John C. Cook, Business Manager & Vice-Pres.

Walter M. Mitchell, Jr., Advertising Manager

BUSINESS REPRESENTATIVES

BOSTON—Arthur C. Shaw, 27 Southgate Rd., Wellesley 81, Mass. (Phone: Cedar 5-3648).

NEW YORK—William K. Hoffman, 58 Euclid Ave., Maplewood, N. J. (Phone: South Orange 2-2484).

BUFFALO AREA—J. D. Parsons, 39 Atlantic Ave., Cohasset, Mass. (Phone: Evergreen 3-0712).

PHILADELPHIA—James R. Corgee, 27 E. Windermere Terrace, Lansdowne, Pa. (Madison 6-9145).

CHICAGO—Richard F. Hanrahan, 333 N. Michigan Ave., Chicago 1, Ill. (Phone: Central 6-6964).

CLEVELAND—A. E. C. Smith, P. O. Box 3054, Cleveland 17, Ohio (Phone: Cherry 1-7352).

CHARLOTTE—W. Cliff Rutland, Box 102, Gastonia, N. C. (Phone: University 7-7995).

MIAMI—Ray Rickles, 814 Chamber of Commerce Bldg., Miami, Fla. (Franklin 9-1495).

LOS ANGELES—Loyd B. Chappell & Associates, 9693 Wilshire Blvd., Beverly Hills, Calif. (Olympia 2-1490).

SAN FRANCISCO—Fred Jameson, Loyd B. Chappell & Associates, 821 Edinburgh St., San Mateo, Calif. (Diamond 3-8806).

EUROPE—Harry Backer, National Provincial Bank Chambers, 15 Grafton St., Altrincham, England.

TIME SAVER for busy readers

Here is a summary of some of the major articles in this issue
Use it to organize your reading time most effectively

Tufted Textiles 1958 (a special 42-page section) 99

■ The material for this year's tufted section is the end result of numerous plant visits made by TI editors and the resulting discussions with men who know the industry intimately, plus the contributions of technical writers not on TI's staff. The section looks closely at several facets of the growing industry.

Rolled sheeting is fed into a printing machine at Lawtex Corp., Dalton, Ga., to receive from a master design the pattern later to be tufted onto the fabric. The sheeting is guided at high speed into the printing operation by a system of guides which matches the sheeting centerline with the pattern centerline and keeps one selvage tracked to build a roll of printed sheeting with one smooth end. This one accurately built end is important when the sheeting must be guided through a yardage tufting machine.

Foam rubber padding is being vulcanized to the latex of tufted carpets at Dalton Carpet Coating Co., Inc., Dalton, Ga., to provide built-in cushioning. The system is economically sound, giving a padding and carpet combination at a cost figure lower than equivalent carpet- and hair-padding combinations. The rubber is temperamental—tricky to prepare and apply, although stable enough once it is attached to the carpet. Executive nightmare: the rubber may fail to foam and thus end up as a hard layer vulcanized forever to an expensive carpet. The same rubber is prepared in fabric-backed sheets for use under existing carpets.

Since the last special tufted section was printed in TI the industry has enjoyed a considerable measure of technological progress. In that category fall tufting machines with individual needle control. These units are available with either electrical or mechanical needle controls, and they form their patterns by leaving bare areas in the tufted designs of cut pile. One series of tufting machines is available with dial controls for such factors as yarn feed, pile height, etc. Scrim is applied along with the latex to add dimensional stability to carpeting.

Wallace Hammel, Jr., and Joe Erwin team up to present the industry with a timely presentation of the electrical workings and the flexibility of electrical pattern controls.

P. Abbenheim gives an up-to-date discussion on the dodges, pitfalls, and triumphs of printing tufted carpets. This is a growing field.

They Conquered the Bends! 83

■ Canton Cotton Mills, Canton, Ga., have developed a system for removing the flexible bends from a card, installing parts for a new setting system, and replacing the bends, at the rate of two cards per eight hours per overhauler. While the bends are off the cards, they are reground in a mill-made set-up which a single mechanic can set up in a few minutes.

One of TI's editors visited the plant recently; his report gives details of the mill's system in words and pictures.

Cleaner Looms, Fewer Stops 86

■ A mill man discusses here the improvements in running which an 80-square weave room obtained by overwaxing its warps at the delivery end of the slasher. These included less tendency of fly to stick to looms, lessened sensitivity of box leathers to humidity changes, and—most important—an increase in weaving efficiency from 95.06 per cent to 96.28 per cent.

Details of a loom-stop test are included.

"We Automated Our Bleachery" 143

■ Two innovations in continuous bleach range operation are helping Russell Manufacturing Co., Alexander City, Ala., to produce quality cottons faster and more economically. These include combination open-width and rope processing, and a unique control system.

In a previous article (TI for September, 1956, pages 94-96) the operation of the range was discussed; this article concentrates on the control system. Described in detail are the temperature, pressure, and cut-off controls which permit cloth to be run at speeds up to 200 yards per minute.

The author, W. O. Bozeman, Jr., is superintendent of the bleachery at Russell, who notes that the range cost $33,000 less than a conventional range.

Techniques of Jacquard Designing 159

■ A veteran designer gives some tips on selecting the proper design paper for a Jacquard pattern, short cuts in transferring the sketch to design paper, making and using a copy desk, and how to prepare card-cutting instructions to insure a minimum outlay of time and money. The design is followed from its inception through to the woven fabric.

Time-saving suggestions set the theme of the article.

TEXTILE INDUSTRIES is indexed in the "Applied Science & Technology Index"

TEXTILE INDUSTRIES is published monthly, with an extra issue in November, at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. Contents copyright 1958 by W. R. C. Smith Publishing Co. W. J. Rooks, chairman of the board; R. P. Smith, president. Executive and Editorial Offices: 806 Peachtree St., N. E., Atlanta 8, Ga. Subscription Rates: United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.50 per year; Foreign Countries, $3.50 per year. Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879. Postmaster, send notices by Form 3579 to 806 Peachtree St., N. E., Atlanta 8, Ga.

Photo courtesy Alden Rug Mills, Lenni Mills, Pa.

What's back of the boom in tufted carpeting?

Big reason for the success of tufted carpeting is the speed of the unique machines used to make it. These huge, 1700-needle "sewing" machines turn out up to 2000 lineal feet of 18-foot-wide carpet in eight hours which is about 15 times more than from conventional weaving.

Equally important, however, is the unique *backsize* applied to the carpet. For here is the ingredient that not only imparts essential body and stiffness, but also helps anchor the loops, prevents raveling and assures dimensional stability. And these also are the reasons why PLIOLITE LATEX is used as the basis for the size.

Other reasons for using PLIOLITE LATEX, specifically, are its permanence, strength, flexibility, light color—and consistently high quality which assure trouble-free coating operations. For full details on high quality PLIOLITE LATEX, or on other Goodyear latices for textile applications, just write to: Goodyear, Chemical Division, Akron 16, Ohio.

CHEMIGUM
PLIOFLEX
PLIOLITE
PLIOVIC
WING-CHEMICALS

High Polymer Resins, Rubbers, Latices and Related Chemicals for the Process Industries

CHEMICAL
GOODYEAR
DIVISION

COATINGS
DEPARTMENT

60

Chemigum, Plioflex, Pliolite, Pliovic—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

WARP SIZING

NEW SERIES OF ARTICLES BY PAUL V. SEYDEL NOW IN BOOK FORM!

The series of articles on warp sizing which appeared exclusively in TEXTILE INDUSTRIES during 1956-1957 is being reprinted in book form and made available to mill technicians and executives, now.

If you read the articles as they appeared you know how thoroughly they covered the subject and you will without doubt want the book for reference and study. If you did not read the series as they were printed, then you will welcome this chance to get your copy of the 500 page book.

The author, Dr. Paul V. Seydel is an internationally known expert on sizing. He is thoroughly grounded in theory and practice and pre-eminently qualified to handle the subject.

Just look these chapter headings over and see how completely the facts are presented.

WARP SIZING

Purpose of Sizing
The Material to be Sized—Cotton
The Material to be Sized—Man-Made Fibers
Materials for Sizing
Analysis and Testing of Materials for Sizing
The Sizing Process
Testing and Analysis of the Sized Materials
Handling and Properties of the Sized Warp
The Slasher Room and its Equipment
Slasher Controls

Order your copy today. Now available in combination with new or renewal subscriptions to TEXTILE INDUSTRIES at the special combination rate of $5.00.

W. R. C. Smith Publishing Co.
Dept. 3-A
806 Peachtree St., N. E.
Atlanta 8, Georgia

Please enter / renew my subscription to TEXTILE INDUSTRIES for two years, and send me a copy of WARP SIZING.

Name_____
Title_____
Company Name_____
Address_____
City_____
State_____

☐ **Enclosed find $5.00 (U.S.A.)** ☐ **Bill me for $5.00 (U.S.A.)**

Foreign Rates on Request

By J. C. C.

► If you get right down to it, there are a lot of things as rare as a day in June. But every time somebody brings that one up, ole S&R remembers a "rare" Christmas card received way back—1923 to be exact—and postmarked Minneapolis, Minn.

A plain printed red card said simply, "Oh What Is So Rare As A Day In June And Only Thirty Days Has September." That was all. And S&R knew *no one* in Minneapolis and further has never figured out if there is really some deep meaning to the message.

Some day we are going to have the postmaster at Mandan, N. D., put some unsigned copies of "Woodman, Spare That Tree" in the mail for Christmas cards and let some of our friends start wondering—for 35 years.

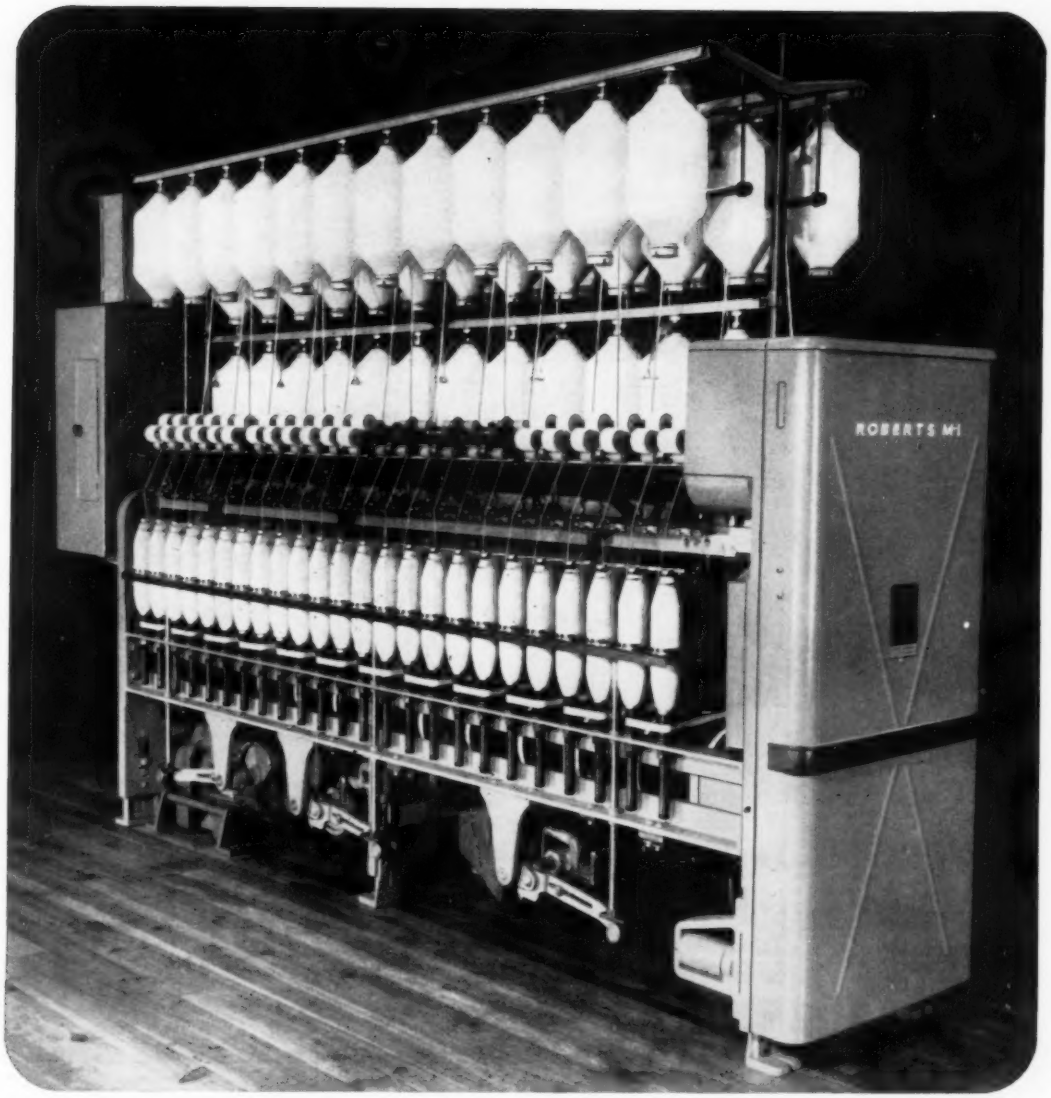
► So now the U. S. Senate is going to investigate all phases of textiles, including "effects of federal programs, foreign competition, changing standards and demands of the market; mergers in the industry, impact of synthetic materials, and condition of machinery and adequacy of transportation facilities." That sounds like a lot for that $25,000 they put down to start the ball rolling.

But how about that old "debbil" T. S. (Third Shift)? Some folks remember way back when a healthy textile industry operated two shifts and let the mill rest a few hours. Believe it or not, the senator proposing the investigation is named *Cotton*.

► If you are thinking about next Christmas, which is just around the corner, here's a suggestion from the Alabama Textile Manufacturers Association: "Give the Best . . . Give Textiles."

► Colleges will go to most any *lengths* to get basketball players these days as witness news item that Purdue University is installing 7 foot beds in new dormitories.

An ad in Greensboro, N. C., newspaper says "More homes will be built in Greensboro between 1950 and 1970 than there were all total in 1950. Now that is encouraging because homes take furniture with up-



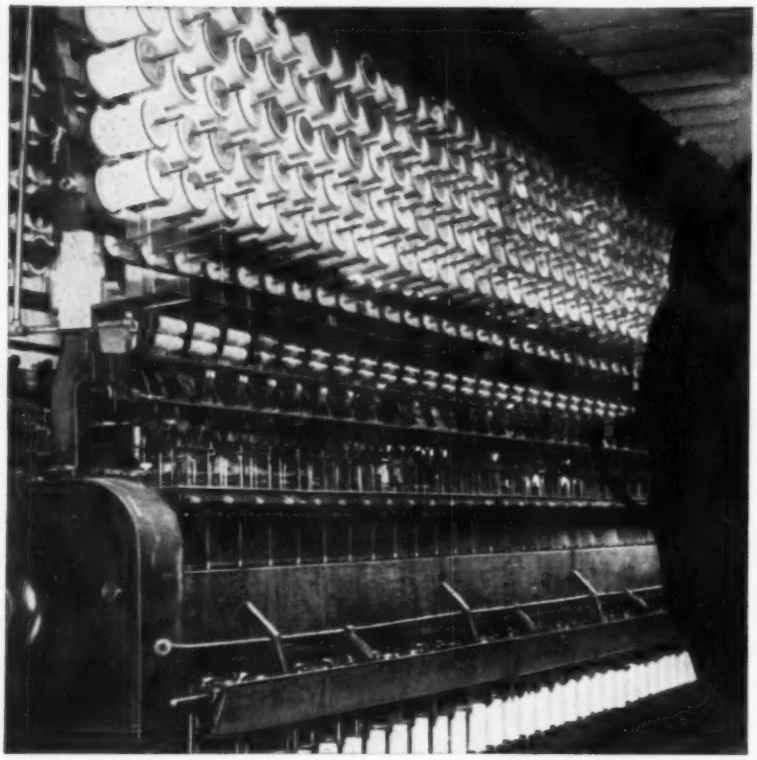
ROBERTS SPINNING

ALL NEW—ALL BALL BEARING ROBERTS M-1 SPINNING FRAME

The benefits of BIG PACKAGE SPINNING are available **AT $32 TO $40 PER SPINDLE INSTALLED** in your mill, depending on gauge and frame lengths. These frames produce better yarns at higher front roll speeds and put more ounces of yarn on the bobbin.

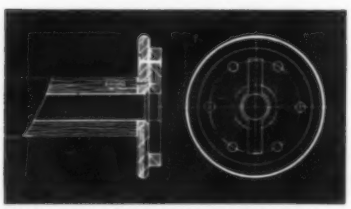
More than 250 Roberts narrow frames have been installed in mills during the past eighteen months.

ROBERTS COMPANY
SANFORD, NORTH CAROLINA



For over 45 years, these same Lestershire bobbins have seen continuous use at The Linen Thread Co., Inc.!

Many of the Lestershire bobbins shown here have been in continuous service since 1913! They're still on the job at The Linen Thread Company, Inc., Patterson, N. J. after thousands of hours of punishing operation. Mr. Ronald Vaughan, Assistant Plant Manager, states: "Our bobbins get rough handling. They're thrown into boxes, dropped on the floor. We find the Lestershire Bobbin has the strength, durability and accuracy we require in our plant."



EXCLUSIVE ANCHOR SCREW CONSTRUCTION

Lestershire's unique and patented method of joining bobbin heads permanently to maple barrels is a major reason why Lestershire Bobbins take year-in and year-out use and abuse without failure.

BOBBIN SPECIALISTS TO THE INDUSTRY

Custom produced to fit your precise needs, Lestershire bobbins are furnished in an extensive range of sizes, styles, and construction types.

Bobbins to meet every problem

Whether your bobbin problems involve larger "packages," higher rotating speeds, or the crushing action of tenacious yarns you'll find Lestershire has the engineering skills, tested facilities and depth of experience to produce the bobbin you want . . . when you want it.

REQUEST THIS CATALOG!

For the most up-to-date catalog on Bobbin Construction in the industry, write direct for Catalog W-6.

LESTERSHIRE SPOOL DIVISION

NATIONAL VULCANIZED FIBRE CO.

WILMINGTON 99, DELAWARE

In Canada:
NATIONAL FIBRE COMPANY OF CANADA, LTD., Toronto 3, Ontario

Shorts and Remnants

holstery, drapes, carpets, rugs, sheets, pillow cases, towels—lots of textiles.

► Since summer happens to be coming your way just now, here's a real cool throught from **Ernest D. Key** of Atlanta (Ga.) Belting Co. and Monticello (also Ga.) Bobbin Co., who sends us the picture below of his bobbin roughing mill at Mansonville, Que., Can. He says "hard rock maple"

grows up there in green mountain area and he phoned up there one night last winter, and "it was 28 below zero and they had 40 inches of snow."

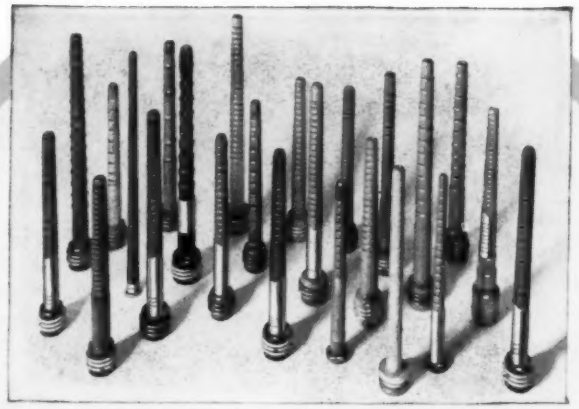
► What became of those old sayings about "A penny saved is a penny earned." "Neither a borrower or a lender be." Maybe they're buried under "Y'all auto buy now." First thing you know, the F.B.I. will be after you for living within your income.

► If you think we're a little slow in getting into our mail, you can put your fears to rest. A letter comes from India with this notation on the flap: "Good Morning, Dear Sir." It wasn't a good morning. It was rainy. It was Monday. A good advertiser put off his June ad until September. Some Danville, Va., crackpot had used about six of our return inquiry cards for race and religious preaching.

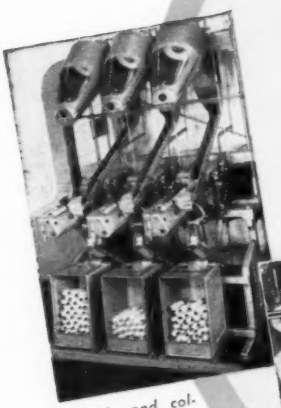
But "Good Morning, Dear Sir" from India suddenly made things look better all around. So the same to you. "Good Morning, Dear Reader." It really is a pretty good day at that. Probably will burn off and be a pretty day, after all.

► Letter from Rumania carries postmark "Republica Populara Romana." What is "populara" about it?

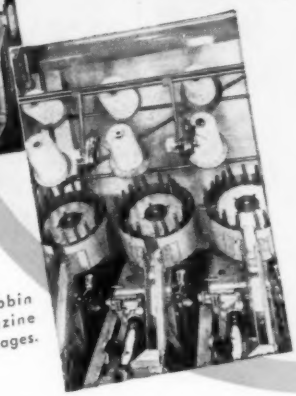
► **Hugh Comer,** Board Chm. Avondale Mills, Sylacauga, Ala., calls to compliment us on "A Light Under A



A few of the many types and sizes of filling bobbins that can be profitably run on the Fill-Master Winder.

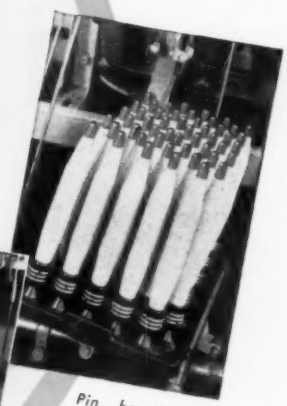


Exhaust hoods and collectors for mills having dust and fly in winding area.



Multi-cell empty bobbin magazine for magazine creeling or single packages.

Packing device for orderly, clean storage of filled bobbins.



Pin boarding arrangement for synthetic yarns.

Only the Whitin-Schweiter FILL-MASTER* Filling Winder Gives you such Complete FLEXIBILITY and ADAPTABILITY

Whitin-Schweiter Fill-Master Winder with Bobbin Loader*

Flexible . . . for fully automatic winding of cotton, wool, worsted, synthetics and blends.

Adaptable . . . to a broader range of mill requirements than any other winder thru its complete line of optional accessories (see illustrations)

These are only two of many outstanding advantages, including:

- Machine speeds up to 10,000 R. P. M.
- Speed of individual spindles adjustable
- Bobbins up to 10⅛" • Tail-less bobbins
- Variable layer locking traverse prevents sloughing
- Maintains uniform winding diameters, resulting in more yardage per bobbin

*Trade Mark

Whitin MACHINE WORKS

WHITINSVILLE, MASS.

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

Manufactured by **WHITIN** *for sale in U. S. A. and Canada*

and by **SCHWEITER, LTD., Horgen (Zurich, Switzerland)** *for sale in other countries*

RE-NEW-COAT Resurfaces, Protects and Decorates Masonry Buildings In One Application!

Re-New-Coat, with an outstanding record of performance even under severe conditions, actually anchors itself into masonry surfaces and becomes part of the structure itself. It is resistant to alkali, acid fumes, smokes, gases and other corrosive factors. Remarkable adhesive qualities of Re-New-Coat, due to presence of Devran Epoxy Resin, insure a firm tight bond to masonry.

ECONOMY — Because of the several mil thickness of dense structurally strong coating, built with only one application, there is no need for a second time-consuming application.

LONG LIFE PROTECTION — Prolonged protection against surface erosion is just one of the beneficial characteristics inherent in Re-New-Coat.

WEATHER PROTECTION — Masonry structures subjected to constant erosion caused by driving rains and chemical fumes common to industrial areas are effectively protected for years to come.

TRUSCON "RE-NEW-COAT"® with Devran Epoxy Resin actually extends the life of your buildings!

FIELD DEMONSTRATION

Ask for field demonstration in one or more of the attractive colors available!

TRUSCON *Laboratories*
Industrial Maintenance
Division of Devoe & Raynolds Co., Inc.
Detroit 11, Michigan

TRUSCON Laboratories
Dept. T-20, 1700 Caniff
Detroit 11, Michigan

☐ Have field engineer call for appointment.
☐ Send more information on RE-NEW-COAT at once.

Name _____
Company _____
Address _____
City _____ Zone ____ State _____

Shorts and Remnants

Bushel" [Apr. '58]. Wants 200 copies to distribute at garment manufacturers meeting in California. Says the spinning, weaving, knitting job isn't done until the garment is made, bought, and paid for; and that's true.

► Those New England textile machinery folks who went to the race track recently with old S&R will get a chuckle out of folks who ask us not only about current textiles business conditions but a forecast for the next six months or the next year. Someone recently asked for a preview of the next three years. They needn't chuckle. We were the big winner that day at the track. We broke even. We're glad we did. We needed the money.

We have hit the nose on the head on textiles just about 50% of the time. Probably could have done better if we hadn't had all those population, spindle activity, and fiber consumption charts to help us.

Now S&R will lay you even money that the textile curve goes up in the fall and further improves after the first of the year. If we lose, we can always say we didn't say what fall or what year.

Seriously, our form sheet says 1958 will end on an improved note—textiles will look better for 1958 as a whole. 1959 will be at least 10% better than 1958 production-wise; and 1960 will be a banner textile year.

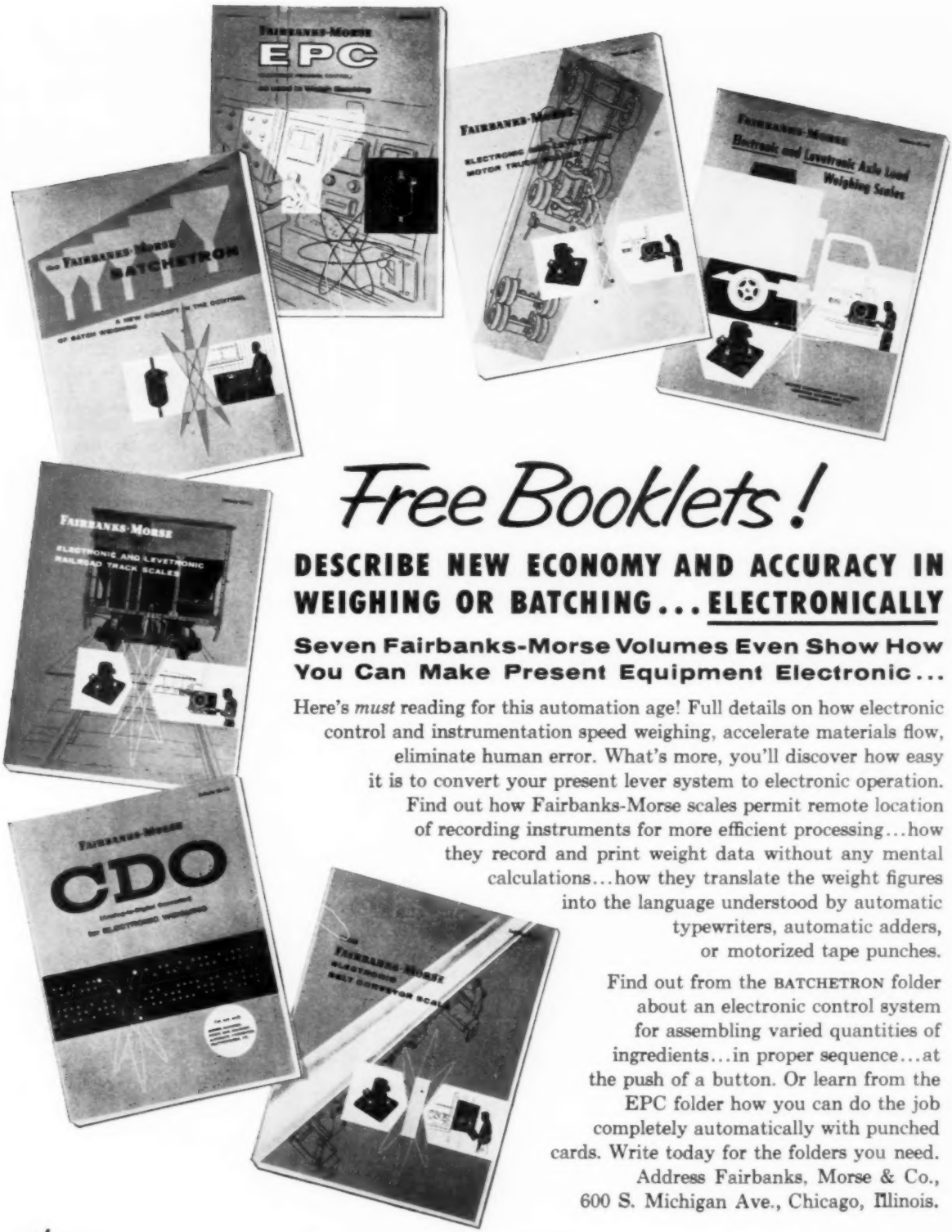
And who was it told the difference in a recession and a depression. A recession is when you lose your job. A depression is when I lose mine.

► **F. E. Smothers,** Asst. V.P. Textile Insurance Co., High Point, N. C., wants a copy of "Flammable Fabrics Act" [Oct. '53], but we ran out of reprints on this.

► **John Duerst,** Coats & Clark, Inc., Clarkdale, Ga., thanks TI for excellent presentation of "How Much Twist Do You Put In Roving and Yarn?" [Mar. '58]. But he suffered a heart attack while reading his own article and spent three weeks in hospital. Must be a powerful article.

► Inquiry from Productexa Co., Inc., N. Y., quoted here in April, referred to non-woven ribbons rather than woven and that is different.

► **H. M. Jackson,** Mgr. International Shoe Co., Malvern, Ark., wants Hol-



Free Booklets!

DESCRIBE NEW ECONOMY AND ACCURACY IN WEIGHING OR BATCHING... ELECTRONICALLY

Seven Fairbanks-Morse Volumes Even Show How You Can Make Present Equipment Electronic...

Here's *must* reading for this automation age! Full details on how electronic control and instrumentation speed weighing, accelerate materials flow, eliminate human error. What's more, you'll discover how easy it is to convert your present lever system to electronic operation. Find out how Fairbanks-Morse scales permit remote location of recording instruments for more efficient processing...how they record and print weight data without any mental calculations...how they translate the weight figures into the language understood by automatic typewriters, automatic adders, or motorized tape punches.

Find out from the BATCHETRON folder about an electronic control system for assembling varied quantities of ingredients...in proper sequence...at the push of a button. Or learn from the EPC folder how you can do the job completely automatically with punched cards. Write today for the folders you need. Address Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago, Illinois.

FAIRBANKS-MORSE

a name worth remembering when you want the BEST

SCALES • PUMPS • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • RAIL CARS • HOME WATER SERVICE EQUIPMENT • MAGNETOS

SOUTHERN STATES CD-2 CARD DRIVE COMBINES INTO ONE UNIT ALL OF THE FEATURES WANTED FOR COTTON CARDS

Here is why we honestly believe the Southern States CD-2 Card Drive is the safest, simplest, most efficient individual drive on the market today:

Finger-tip control. No changes in operating procedure. Unit is controlled by simple clutch lever in both starting and hand stripping.

Full speed in seconds. A 1½ hp high torque card motor brings card into full operation, seconds after clutch is engaged.

Safety engineered. All belts and moving parts are covered. Starting and idling is accomplished by simple clutch lever.

Rugged construction. The entire unit is built for heavy-duty service: steel main stand; cast iron jackshaft bracket and main pulley; cast aluminum cover. Ball bearing throughout.

Easy installation. Fits any cotton card. Minimum number of holes to drill in frame. Drive pulley, collar and clutch are preassembled and slip on to shaft using existing keyway.

Get the facts from your Southern States representative or write for Bulletin 301-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Shorts and Remnants

combe bunch builders; **Paul Boudreau,** Pur. Agt. Pinatel Piece Dye Works, Joliette, Que., Can., wants Dyken rug wrapping machine; **A. J. Richards,** Res. & Dev. United Elastic Corp., Lowell, Mass., wants more on shuttleless looms [Apr.]; **John R. Paulkner,** Qual. Con. Iselin-Jefferson, N. Y., wants more data on Draper looms and shuttles; **John Morelle,** Supt. Star Carbonizing Co., Woonsocket, R. I., inquires for coring machine for baled wool; **E. H. Swan,** Supt. Hooven & Allison Co., Zenia, O., writes for more on Curlator Corp., April ad; **George Haddad,** Sedas Super, S.A. Mexico, D.F., wants small loom for samples; Le Directeur General Sotexi, Paris, France, writes for "weaving loom on which cops are automatically and directly made" and he must mean the Unifil loom winder of Universal Winding Co.; Director-Presidente, Aziz Nader, Sao Paulo, Brazil, is interested in electronic multicolor screen printing machine [Feb. '58.].

► Another good textile item comes from W. C. Dillon & Co., Inc., Van Nuys, Calif., who thinks our good readers will be interested in how movie star Jeanne Carmen is handled by Dillon weight indicator and a Hyster lift truck. See below. So they call this "handling"?

► And congratulations to E. F. Houghton & Co. and to "Near-Editor" Chas. E. Carpenter on Golden Anniversary of "The Houghton Line," well-read journal of this company. We want Mr. Carpenter to

BECCO

SILICATE-FREE

BLEACHING

"We dyed ½-million yards this week . . . with no rejects!"

So says a new user of a Becco Silicate-Free Bleaching Process who previously suffered up to 25% rejects.

When complex silicates of calcium and magnesium formed scale on equipment and left resistant residues in the cloth, Becco's recommendation for Silicate-Free Hydrogen Peroxide bleaching solutions eliminated dye house troubles.

This doesn't mean that Silicate-Free Bleaching is the answer to every textile problem, but if you're having any trouble due to silicate scale and insoluble residues, Becco Silicate-Free procedures* — freely available to the textile industry — will help you.

Fact is, Becco can help you with many textile problems. Just give us a call at . . .

ATLANTA	WX-2000	**LOS ANGELES**	Raymond 3-4086
FRAMINGHAM, MASS.	Trinity 5-6141	**NEW YORK**	Murray Hill 3-8227
BUFFALO	Bedford 8300	**PHILADELPHIA**	Howard 5-6280
CHARLOTTE	Franklin 6-8581	**SAN FRANCISCO**	Sutter 1-3461
CHICAGO	Avenue 2-1197	**VANCOUVER**	Portland, Oregon; Butler 9-5595

*U.S. Patents 2,740,689 and 2,820,690

Progress in Peroxygens ®BECCO

BECCO CHEMICAL DIVISION • Food Machinery and Chemical Corporation
Station B, Buffalo 7, New York

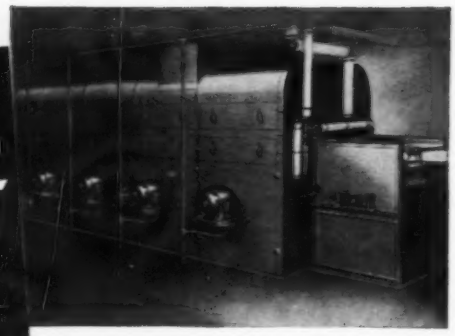
fmc FOOD MACHINERY AND CHEMICAL CORPORATION

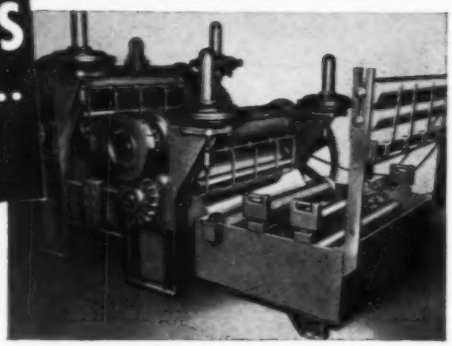
FMC CHEMICALS INCLUDE: **BECCO** Peroxygen Chemicals • **WESTVACO** Phosphates, Barium and Magnesium Chemicals • **WESTVACO** Alkalis, Chlorinated Chemicals and Carbon Bisulfide • **NIAGARA** Insecticides, Fungicides and Industrial Sulphur • **OHIO-APEX** Plasticizers and Chemicals • **FAIRFIELD** Pesticide Compounds and Organic Chemicals

For better Fibre Processing

SARGENT WASHERS AND DRYERS

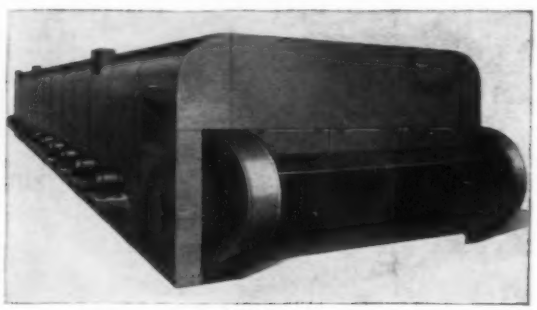
any Fibre... any blend





Backwasher and Backwash Dryer — pneumatic loading, washer has stainless steel rolls and bowls. Dryer's new design allows lowered operating temperatures, eliminates brittle ends, injury to tops.

Tops in their field, these rugged machines are continuous and automatic, completely dependable. Fibre quality protection, operating efficiency and economy are unsurpassed . . . Sargent Washers provide *clean* water for the final rinse — automatically timed dump controls remove sediment from each bowl at pre-set intervals. Lanolin recovery systems for wool washers, side-settling tanks if desired. . . . Sargent Dryers are the standard for the industry — the speediest, easiest dryers on the market to install, economical to operate, simple to maintain. The Single Apron Dryer is the simplest, most compact down-draft dryer ever built. Another "first" by Sargent is a gas-fired wool dryer, suitable for all fibres, that protects the quality of even the finest cashmere. The Contra-Flow Dryer with its revolutionary up-and-down air flow guarantees fastest, completely uniform drying through entire bed of fibres. May we tell you more?



Raw Stock Dryer — Single Apron, downdraft. For scoured, bleached or dyed wools, cottons, synthetics.

Raw Stock Dryers; Backwashers and Backwash Dryers; Stainless Steel Washers and Bowls; Continuous Automatic Extractors and Squeeze Rolls; Contra-Flow Dryers; Washers for scouring, bleaching, acidifying; Lab Washers and Dryers; Pilot Plant Dryers; Skein (pole) Dryers; Yarn scouring machines; Shrink-treatment systems; Automatic Feeds; Conveying Systems; Yarn and Top Presses.

C. G. SARGENT'S SONS CORPORATION

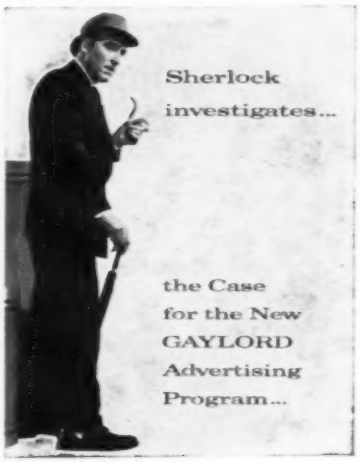
Graniteville, SINCE 1852 Massachusetts

PHILADELPHIA 19 — F. E. Wasson, 519 Murdock Road
CINCINNATI 15 — A. L. Merrifield, 730 Brooks Avenue
CHICAGO 44 — John Law & Co., 5850 West Lake St.
DETROIT 27 — Clifford Armstrong Co., 16187 Grand River Ave.
HOUSTON 17, TEX. — The Alpha Engineering Co., Box 12371
CHARLOTTE, N.C. — W. S. Anderson, Carolina Specialty Co.
ATLANTA, GA. — J. R. Angel, Mortgage Guarantee Building
TORONTO 1, CAN. — Hugh Williams & Co., 27 Wellington St. East

Shorts and Remnants

understand that the old joke about the guy who named near-beer being a poor judge of distance is not an aspersion on his talents and titles.

► Advertiser Gaylord Container Corp. warns us that Sherlock Holmes is going to visit TI in their



1958 campaign. Seems those Gaylord chaps almost boxed him in.

► **E. R. Sils,** Pur. Dept. Leader Thread Corp., N. Y., wants 100 lb O.D 5-1 Vat Dye #5 polished spools, govt. spec. He called Textile Thread Co. at Watertown, N. Y. Got right town but wrong state. That mill's in Watertown, Mass.

► It depends upon where you are sitting. Du Pont nylon production is reported up 10% over last year; a contributor quotes a finishing plant of a large group as having highest profits in history for the last six months.

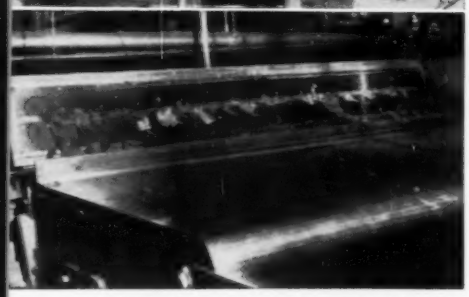
► "Profit Life of Textile Machinery" (price $1 per copy) available from American Textile Machinery Assn., P. O. Box 596, Vienna, Va., makes interesting reading. This report " . . . describes many—but not all—newly developed textile machines, and machine improvements and refinements throughout all phases of textile manufacturing. . . " Also discussed is growth of multiple shift operation and consequent gearing of machinery to such operation. Anyone interested in mill profits and savings in new machinery should study this.

(Continued on page 22)

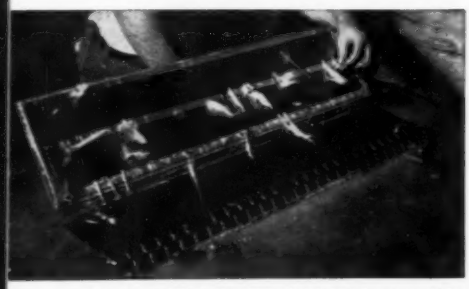
You never "over-buy" or "under-protect" with ERIEZ

job-rated textile magnets

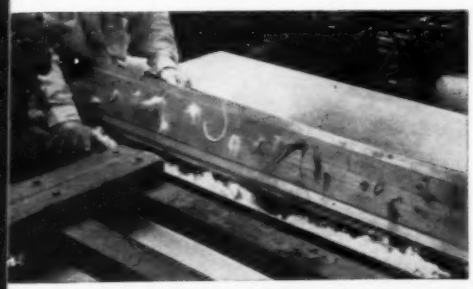
Typical installations where different models and magnetic strengths of Eriez textile magnets were required to provide proper protection.



Antiseptic Mattress Co., Mass. Two powerful Eriez Magnets, used to remove tramp iron from a cotton line, have proved extremely effective by practically eliminating machinery damage, reducing downtime and loss of production. The first unit is a Magnetic Hump in the line between the picker and the condenser; the second is an ULTRAPOWER magnet located just above the Spiked Apron



Greenwood Mills, S. C. Since their installation, several Eriez SUPERPOWER magnets have improved plant safety by completely eliminating fire breakouts. These units have also reduced machinery damage at the textile mill by removing all traces of metal contamination from the processing lines before the material passes through the feeders.



James Lees and Sons Company, Va. This rug manufacturer has considerably reduced machinery damage with a number of Eriez MODEL D Spiked Apron Magnets installed in the carding department. In addition, the company states, magnets have increased production by cutting the amount of downtime and have also lowered maintenance costs.

Do the magnets you now have (or contemplate buying) give you the best possible protection at the lowest cost?

Are they strong enough to remove all traces of tramp iron from textile processing lines before it can cause fires, machinery damage or loss of production?

With Eriez textile magnets, you're *sure* of getting the proper size, strength and type of magnet best suited to your specific needs. Eriez, leader in research and design of permanent magnetic equipment, introduced virtually every type of magnetic separator now used in the textile industry. To keep pace with ever changing needs, Eriez is constantly developing new models in varying strengths to produce the most efficient separators at lowest cost for every application.

In addition to providing the most complete line of non-electric textile magnets available, Eriez offers the buyer these important advantages: magnetic strength is guaranteed indefinitely; all but lowest-priced models are Factory and Mill Mutual approved, and are 53% to 70% stronger than other listed magnets; availability through your OEM.

A skilled laboratory and field staff thoroughly analyzes your requirements. By studying your particular problem, they can *and will* recommend Eriez' *lowest cost magnet* in proper size, type, and strength to do the job best without "over-buying," without danger of "under-protecting".

Eriez magnets, designed *specifically* for the textile industry, provide *more magnetic strength per dollar* than any other magnetic units. For the best protection and the most efficient installation at lowest cost, do as hundreds of other satisfied customers have done—look to Eriez *first!*

All Eriez magnets are non-electric, self-contained. They operate without any wires or attachments. Magnetic power is guaranteed forever. There are no operating or maintenance costs; first cost is the *last*. The following models, for use in textile applications, are approved by Factory Mutual Fire Prevention Bureau and Mill Mutual Fire Prevention Bureau: Extrapower, Ultrapower and Superpower.

FREE!

. . . interesting literature on Eriez Spiked Apron magnets for textile use. Send today!

ERIEZ HI-POWR MAGNETIC SEPARATORS

Clip it, mail it!

ERIEZ MANUFACTURING COMPANY
72-F MAGNET DRIVE
ERIE, PA.

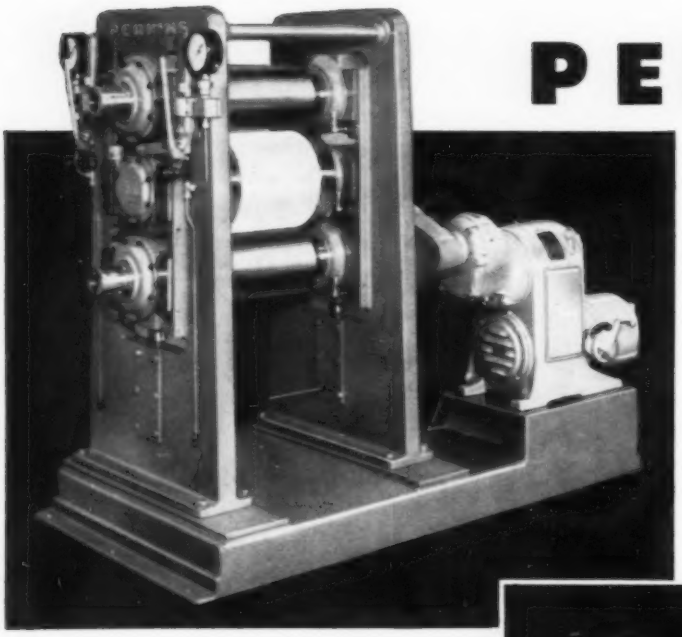
Please mail literature concerning Eriez' complete line of textile magnets.

NAME_____

COMPANY _____

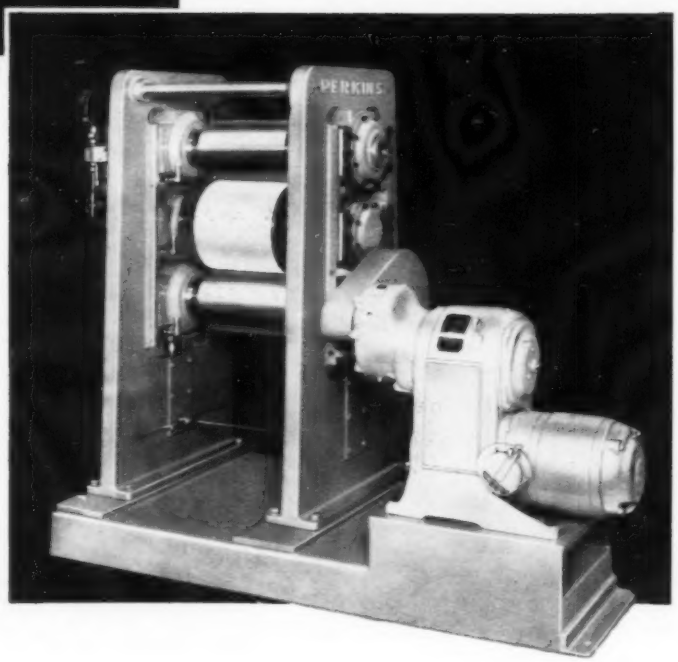
ADDRESS_____

CITY_____ STATE_____



PERKINS

Three-Roll Laboratory Calenders



NEW *Design*

★ ★ ★
ECONOMICAL AT SURPRISING LOW COST
★ ★ ★

Perkins announces this improved laboratory calender at a considerable saving in cost. With this equipment, you can do your experimental work, and finished production up to 24" width. It will pay you to investigate this outstanding development.

B. F. PERKINS & SON, INC.
HOLYOKE, MASSACHUSETTS

For further information use Handy Return Card, Page 209

*REG. U. S. PAT. OFF. †DU PONT POLYESTER FIBER ΦCELANESE TRIACETATE FIBER

New color appeal for prestige synthetics!

AMACEL*... AMACRON*... LENRA* dyes

Three fine selected dye groups for uniform dyeing and printing of synthetic fabrics. AMACEL Dyes for nylon and acetate. AMACRON Dyes for Dacron†. LENRA Dyes for Arnel® triacetate. Each designed to give maximum fastness to light, washing and textile processing. Each offered in a wide range of consumer-pleasing shades. For technical literature and working samples, write or call your Koppers Dyestuff man at our nearest branch.

KOPPERS

Koppers Co., INC.
CHEMICAL & DYESTUFFS DIVISION
(FORMERLY AMERICAN ANILINE PRODUCTS)

KOPPERS BUILDING, PITTSBURGH 19, PA. **PLANT:** LOCK HAVEN, PA.
BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn. • Columbus, Ga. Los Angeles, Cal. **Dominion Anilines & Chemicals, Ltd.**, Toronto, Canada

Work with your AIM*. . . William L. Barrell Co., Inc., does . . .

New Acme Steel Strapping Tool speeds baling

THE BELLE-VUE PLANT OF THE WILLIAM L. BARRELL CO., INC., HILLSBORO, N. C., with the help of their Acme Idea Man, sought a way to make baling their fabrics faster and easier. (Idea No. S6-10)

The new B-5 Stretcher proved a good answer. The bales are still processed in the same way—enclosed with asphalt impregnated paper, loosely encircled with steel strapping, and then compressed. But then the B-5 takes over, and makes the tensioning operation much easier and noticeably faster. Using this method, one man produces about 40 bales a day—all strong and secure.

Workers like the new B-5 Stretcher, too. This light, strong tensioning tool can be used in most any application and works equally well in any operating position.

Acme Idea Man E. S. Lumpkin aids the Belle-Vue plant and many other companies with materials handling problems.

***Work with your Acme Idea Man.** He is aware of the latest time and money-saving solutions to materials handling problems. Call or write Dept. TFS-68, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Ltd., 743 Warden Ave., Toronto 13, Ontario.

ACME STEEL **STEEL STRAPPING**

HOECHST
SPECIALTY VAT DYES

NOW MANUFACTURED
IN THE U.S.A. BY

HOECHST CHEMICAL CORP.
WEST WARWICK, R. I.

HOSTAVAT BRILLIANT ORANGE GR
HOSTAVAT SCARLET H4G
HOSTAVAT SCARLET HGG
HOSTAVAT BORDEAUX HRR
HOSTAVAT BROWN HRR
HOSTAVAT PRINTING BROWN HTM

SOLE SELLING AGENTS

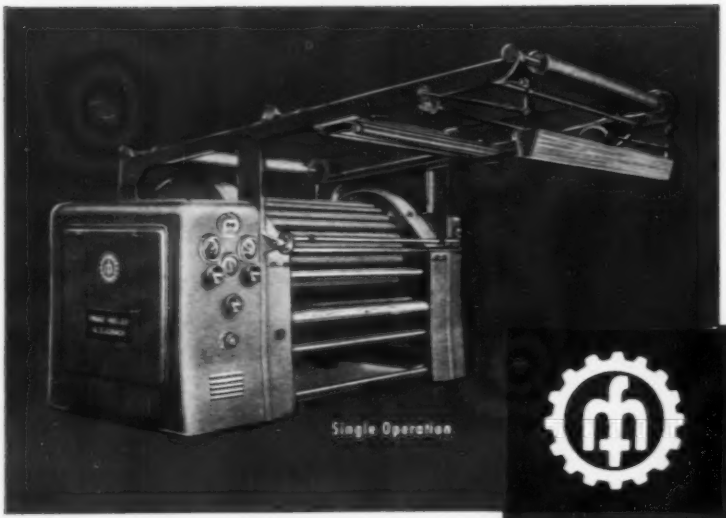
CARBIC COLOR & CHEMICAL CO., INC.
451 WASHINGTON STREET, NEW YORK 13, N. Y.

Charlotte — Columbus
Providence — Los Angeles
Philadelphia — Hamilton, Ontario

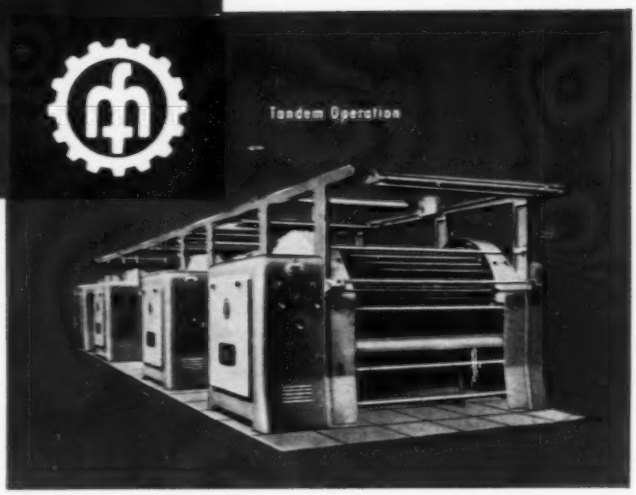
TECHNICAL REPRESENTATIVES AND DISTRIBUTORS FOR
FARBWERKE HOECHST AG.
FRANKFURT-HOECHST
WEST GERMANY

HOECHST

WHY 80 ? MAYBE 30 ARE SUFFICIENT



THE RESULT
OF 100 YEARS
EXPERIENCE



30 of these high speed nappers replaced 80 standard nappers in a North Carolina mill

for reasons of:

- **New Processing Methods**
- **Unequalled Finish**
- **Highest Production**
- **Labor Savings**

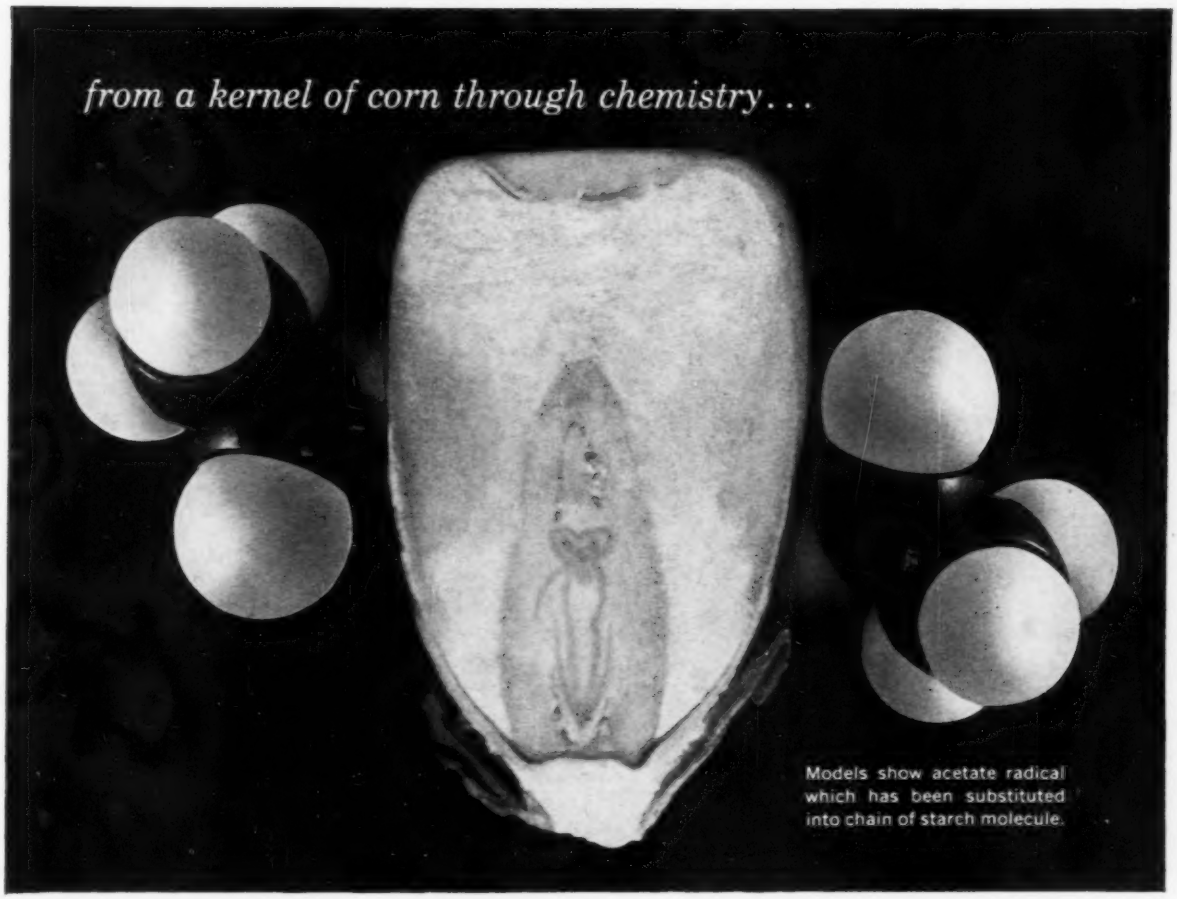
Our agents and service engineers are in the field. Contact them, they'll give you advice.

SOUTHERN U.S.:
PARROTT & BALLENTINE,
610 S. CAROLINA
NATIONAL BANK BUILDING
GREENVILLE, S.C.

NORTHERN U.S.:
TEXTILE MACHINERY
IMPORT CO.
277 NORTH AVENUE
NEW ROCHELLE, N.Y.

COMBINE OF TEXTILE MACHINERY MANUFACTURERS COMMITTEE

FRANZ MÜLLER • MASCHINENFABRIK • M.GLADBACH (WESTERN GERMANY)


from a kernel of corn through chemistry...
Models show acetate radical which has been substituted into chain of starch molecule.

NEW STARCH DERIVATIVE

Another National first! This time: KOFILM, a unique starch acetate ester that insures the extra protection needed to overcome weak spots in textile warp sizing.

KOFILM forms exceptional films. High in strength. Extremely flexible. Very tough. Solutions are slow congealing. Uniform pick-up, too, because of constant viscosity.

KOFILM is available in a complete range of viscosities. Why not compare it with the starch product that you are now using. Write for data and sample.

National

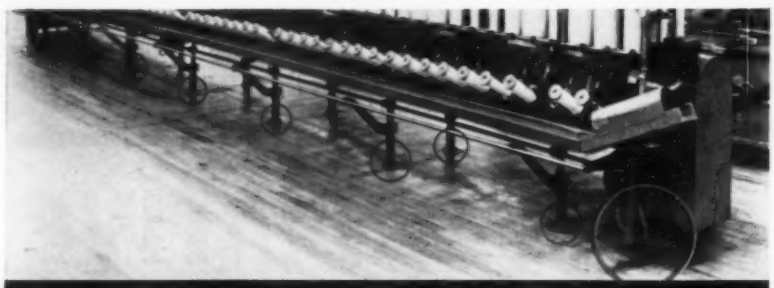
STARCH PRODUCTS INC.

750 Third Avenue, New York 17 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

NEWS

ABOUT TEXTILE MACHINE MOUNTS

Unisorb offers three cost-saving benefits for installing looms, twisters, spoolers, warpers and similar equipment . . . Legs or framework can be solidly secured to the floor without bolts or lag screws; No danger of machines "walking"; and Up to 85% of transmitted vibration is absorbed. Good on concrete or wood.



Machines with long drive shafts need special Type "T" Unisorb mounting. This Respooler was installed quickly, without bolts or lag screws and operates smoothly at low noise level.

Every machine has a vibration "personality." Different machines require different densities. Only Unisorb provides the right density and thickness.

Try Unisorb on our trial offer! Let us send you the right density and thickness for a specific machine. If not satisfied, return within 30 days and we'll cancel the invoice. Write or call, today

UNISORB Division of the FELTERS Co.

Textile Supply Company, Dallas, Texas Industrial Supply Company, Clinton, S. C.

Want more information? Send for set of Unisorb "Facts" Books!

212 South St., Boston, Mass.
Division of The FELTERS Company

Please send me a set of Unisorb "Facts" Books and trial offer request.

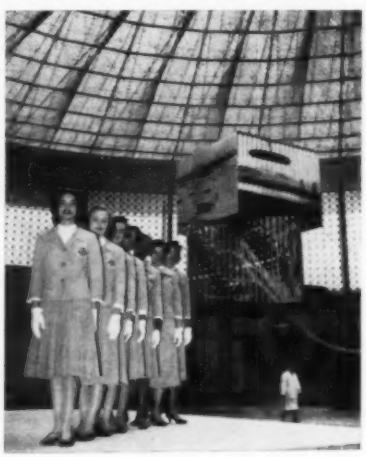
Company.....
Name.....
Address.....
City.....Zone....State.....

Shorts and Remnants

(Continued from page 14)

► All of which brings up the Southern Textile Exposition at Greenville, S. C., Oct. 6-10, which will be the biggest ever. Also, the American Textile Machinery Exhibition is two years away—1960—but press releases are already coming in indicating twice the space of previous shows. And a young lady with the Dept. of Commerce, Washington, D. C., called S&R the other day to see if TI would be interested in a feature story on four major U.S.A. textile machinery folks exhibiting at a show in Poznan, Poland, this year and we regretfully declined. We already had the FBI in here once, and what with these cards being filled out by Danville, Va., readers expressing violent feelings, we are looking for a good lawyer already.

► We are almost afraid to print this picture of seven American girl guides at the Brussels World Fair, but Chemstrand Corp. says they are wearing uniforms of Acrilan, so here they are in the American pavilion.



While we are on Chemstrand, thanks to **Robert J. Ford,** Sr. Engr., who sends us an inquiry on American Air Filters, even though he read about them in another magazine. Okay—read it wherever you want, but send the inquiries to TI.

"Resulted In Sales"

" . . . Previous articles in this publication have brought many leads to us both directly and through inquiries made to you. A large number

DEPENDABLE FLEXIBLE SOURCE OF MAJOR CHEMICALS FOR THE TEXTILE INDUSTRY

CARBON BISULFIDE exceeds 99.99% purity. Stauffer was the first—is still the largest—producer of this essential chemical. Shipped in tank cars of 8000 and 10,000 gallons from Bentonville and Roanoke, Va., Lowland, Tenn., LeMoyne, Ala., Chester, Pa., and Perry, O.; in 5, 10 and 55-gallon drums from LeMoyne and Richmond, Cal.

SODIUM HYDROSULFIDE in aqueous solution of high purity and highest practical concentration is shipped in tank cars of 8000 and 10,000 gallons from Chester, Pa., Roanoke, Va., Lowland, Tenn., and Richmond, Cal.; in 55-gallon drums from Chester and Richmond and in tank trucks from Richmond.

CAUSTIC SODA of 50% and 73% liquid Rayon Grade is shipped in tank cars of 8000 and 10,000 gallons from Niagara Falls, N. Y.

SULFURIC ACID is available in commercial grades of 77.67% to 122.5% H_2SO_4; as Oleum of 15% free SO_3 to 100% liquid SO_3, and as regenerated, water-white 98% H_2SO_4. Shipments are made in barges, tank cars, tank trucks, drums and carboys from many points in the South, Midwest and West.

For continuous, dependable, flexible supplies of textile chemicals...make your arrangements with Stauffer.

STAUFFER CHEMICAL COMPANY

380 MADISON AVENUE, NEW YORK 17, N. Y.

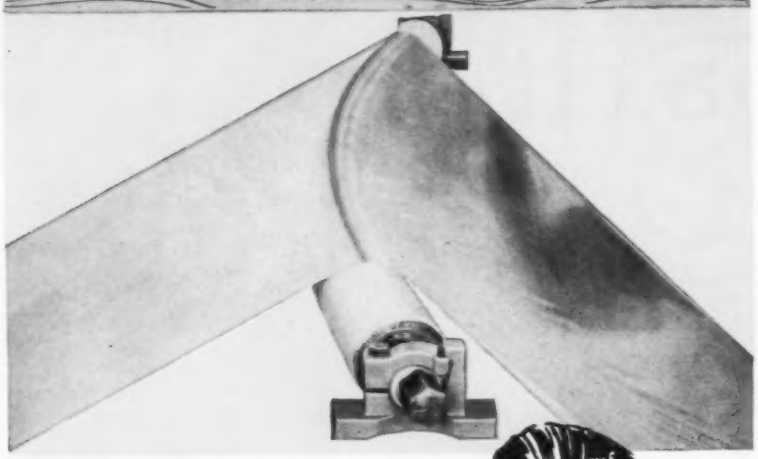
PRUDENTIAL PLAZA, CHICAGO 1, ILL.

636 CALIFORNIA STREET, SAN FRANCISCO 8, CAL.

Simplest Solution...

Wrinkles
Loss of width
Distortion

MOUNT HOPE "Free-Wheeling" EXPANDERS



That's the report from modern mill men everywhere . . . MOUNT HOPE "Free-Wheeling" EXPANDERS have proved to be the simplest, surest way to keep cloth smooth, at full width, and free from distortion. One of many such cases is described in the free, illustrated folder shown below. Send for it. Find out how easily you can protect quality and profits with MOUNT HOPE "Free-Wheeling" Expanders. Fill out and mail coupon today.

Mount Hope

MOUNT HOPE MACHINERY COMPANY
56 Fifth Street, Taunton, Mass.

Please send free, illustrated folder on MOUNT HOPE "Free-Wheeling" EXPANDERS.

NAME ..... TITLE .....

FIRM .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Shorts and Remnants

of these have resulted in sales for us. . . "

CHARLES F. STRANDBERG, JR.
Strandberg Engr. Labs.
Greensboro, N. C.

Non-Woven For Mexico

"We have recently been giving consideration to the manufacturing of non-woven products here in Mexico . . . We would appreciate your forwarding to us, any information you may have; articles, observations, etc., concerning this field in the States, and if possible here in Mexico also. In addition, we would appreciate your comments, if any, on the Curlator Corporation's machinery. . . "

WILLIAM J. WILSON
Hilados Del Norte, S.A.
Monterrey, N.L. Mex.

► Four textile schools were mentioned in the May issue of TI in an Anheuser-Busch Inc. (Corn Prod. Dept.) ad on p. 76 featuring "The Textile Industry Offers a Great Opportunity" message by A. B. Edge, Jr., Pres. Callaway Mills Co., LaGrange, Ga. Schools pictured were Clemson, N. C. State, Ga. Tech, and Auburn. Thanks to Anheuser-Busch for the boost.

► "Identification of Dyestuffs on Textiles" [Jan. '58] still draws requests for reprints: **Frank Cooper,** Dixie Belle Mills, Inc., Calhoun, Ga.; **H. H. Klerx,** Mgr. Holland Mfg. Co., Stroudsburg, Pa.; **George W. Riley,** Fruit of the Loom, Inc., Pontiac Div., Warwick, R. I.; **M. Hoisman,** Dir. Res. Wool Industries Res. Assn., Leeds, Eng. To **Roland Harper,** Greenville (S. C.) Engraving, who writes for 10 copies of "The Why & How of Textile Printing" [Feb. '58], we are sorry we ran out of this article and issue.

► They have purchasing problems in Egypt and Penna. as indicated by requests for extras on Feb. '58 "Mill Purchasing Practices" from Societé Misr de Filature & De Tissage Fin En Coton Egyptien and C. H. Masland & Sons, Carlisle, Penna.

► Feb. must have been a good one, for among requests also for extras on "How Many Cones Shall We Test" were those from Res. Div. West Point Mfg. Co., Shawmut, Ala., and **Herbert E. D. Doring,** Sudamtex

GraduVac Humidification

Employs a new principle with gravity type atomizers

Moisture output graduated automatically

Better spray quality

More even humidity

Parks-Cramer

CERTIFIED CLIMATE SYSTEMS

For Bulletin H45 on GraduVac write Parks-Cramer, Fitchburg, Mass. or Charlotte, N. C. 409

Whatever you buy
IN TEXTILES "made in U.S.A."
gives quality you can trust

Stickers for your mail are offered at no charge. Large quantities at cost as a public service.

We invite you to put your local **S-W** man on the SPOT

He can **SPOT** *trouble and* **STOP** *wasted time for recovering rubber rolls if you will use the S-W Roll-Guard Plan.*

S-W INC.

Ask him to prove this in your mill, on your machinery, this month.

STOWE-WOODWARD, INC. Griffin, Georgia Newton Upper Falls, Mass. · Neenah, Wisconsin

Shorts and Remnants

Sudamericana S.A., Buenos Aires, S.A.

► Poster requests came from **Perfecto P. Orquila,** an "old friend" from San Antonio, Narvacan, Philippines, and **Ing. R. A. Rivadeneyra,** CCC - Gen. Con., Celanese Mexicana, S.A. Mexico, D.F. Latter reader also requested permission to photostat and translate "When Knitting A Slack Course" (Oct. '57). Permission **granted.**

► Just possibly a little closer home is **George D. Yudovitz,** Knit. Dept. Rocky Mountain Tex. Mills, Inc., Denver, Colo., who says of out-of-print TI circulation premium "Komet and Links and Links Machines" that "I thought it was the most informative book on Komet knitting machines I had ever come across." Unfortunately he lost his copy. If any of you reading this have an extra or one not in use please write Geo.

► Maybe TI had better keep reprints of everything. **P. J. White,** Supt. Victor Plant, J. P. Stevens & Co., Inc., wants six copies of drafting articles from Mar. '49 and Dec. '56, but we ran out on this. Maybe U.S.D.A. Lab. at New Orleans still has copies. Also we ran out of "Causes and Detection of Damage in Raw Cotton" which drew a request from **A. C. Young,** Dir. Standards, Clinton (S.C.) Cotton Mills, for seven copies. Mr. Young says " . . . This is an excellent article. . . "

► We do a little better for Berg River Textiles Ltd., Paarl, C.P., South Africa, who wants copy of "Warp Sizing" article in May '57 issue. Also for **Jas. W. Right,** Uster Corp., who asks for reprints of "Review of Literature on Neps" (Jan. '50).

Mill People Impressed

" . . . Our mill people were enormously impressed with the first two articles on 'The Tape Condenser' and would like to use them in training our card fixers. As you may know, we have a new yarn mill here so that every bit of assistance helps."

A. W. COOMBS
Asst. to Pres.
Dixiana Mills
Bennettsville, S. C.

► That's all for this month, we have to go get some fireworks ready for next month.

". . . the boss's new secretary has really improved efficiency. She keeps him occupied so we can get our work done . . . ."

There are more ways than one to skin a cat, and more ways than one to improve slashing or wet processing quality and efficiency.

We refer, quite naturally, to Seyco products and Seyco service.

There may be other ways too, but that's a good starting point.

Warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Seyco Warp Lubricator.

Headquarters for textile chemicals

SEYDEL-WOOLLEY & CO.

748 RICE STREET, ATLANTA, GEORGIA

SEYCO

Personal NOTES ABOUT MEN YOU KNOW

Mr. Lehmann

Mr. Comer

E. R. Lehmann, vice-president of West Point Manufacturing Co., has been chosen president of the Alabama Textile Manufacturers Association. Other officers are **F. M. Lyon,** president of Opp and Micolas Cotton Mills, Opp, Ala., chairman of the board of directors; and **Joel E. Johnson,** vice-president of Geneva-Bama Cotton Mills, Geneva and Enterprise, Ala., vice-president of the association. * * * A highlight of the annual banquet was the surprise presentation of a framed scroll to **Hugh Comer,** board chairman of Avondale Mills, Sylacauga, Ala. The scroll, presented in recognition of Mr. Comer's outstanding services, cites his leadership throughout the years in "making the textile industry one of the safest and most pleasant industries for its many thousands of workers in Alabama."

Edwin M. Griffin has been promoted to assistant treasurer of Beaumont Div., Spartan Mills, Spartanburg, S. C. * * * **Spring Steele** has been elected secretary of Beaumont succeeding E. P. Joyce. Mr. Joyce is currently on leave of absence due to bad health.

Curt Mueller, superintendent of dyeing for Bibb Manufacturing Co., Macon, Ga., retired May 1, after fifty years of unbroken service.

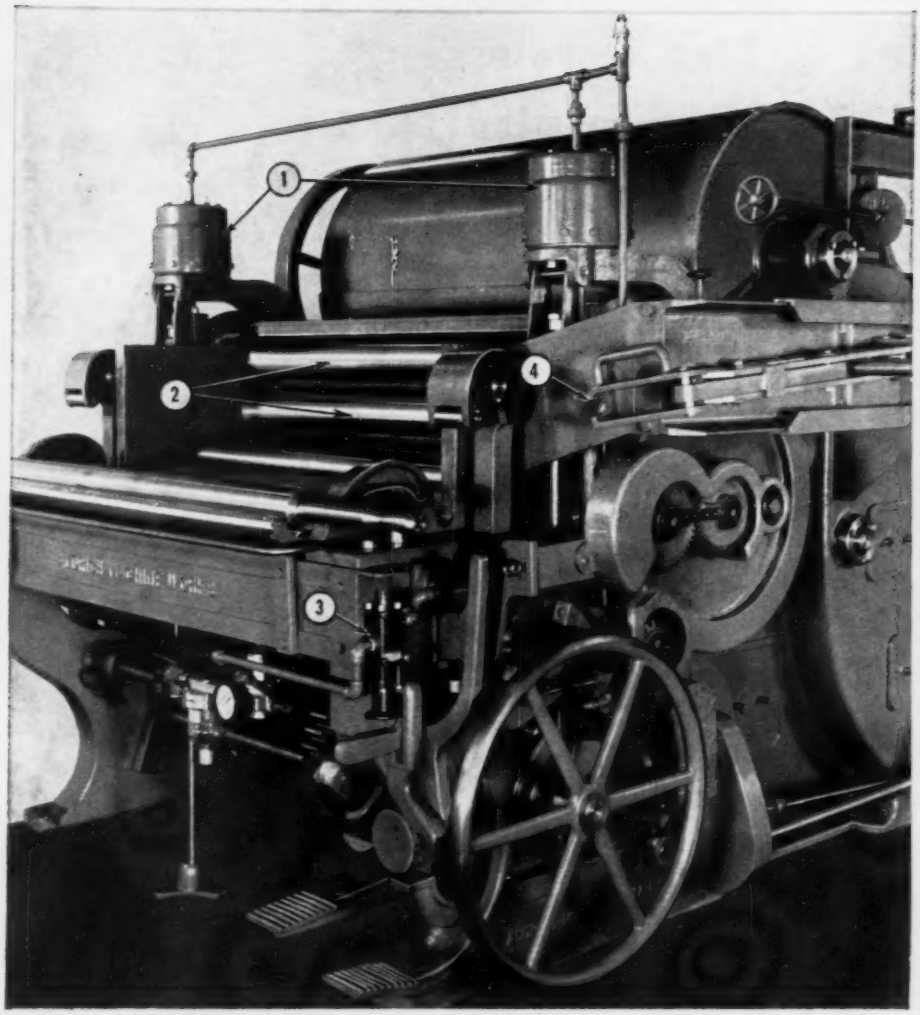
J. Roderick Meikle has been appointed manufacturing manager for Cramerton (N. C.) Mills. He succeeds **Strother E. Murdoch** who has been transferred to Mooresville, N. C., as general manager. Both mills are units of Burlington Industries.

Robert W. Philip has been elected president of the LaGrange, Ga., Rotary Club. Mr. Philip is director of research and development and a vice-president of Callaway Mills Co.

John L. Nisbet has been promoted to executive vice-president and general manager of Carolina Narrow Fabric Co. and Carolina Yarn Insulating Co., Winston-Salem, N. C. As plant engineer and production manager, Mr. Nisbet has been active in designing company processes and equipment. Additional modernization and expansion moves are being planned.

Ed G. Kelly, Brighton Div., Burlington Mills, Shannon, Ga., has been elected chairman of the Personnel Managers Div. of the Cotton Manufacturers Association of Georgia. **Sam A. Cook,** Riegel Textile Corp., Trion, was elected vice-chairman.

For an "Ease of Care" Finish
On Cotton Knit Goods
STANSET
IS FAR SUPERIOR
Cotton fabrics finished with STANSET have superior dimensional stability — they retain their smooth appearance and shape for greater lengths of time despite repeated launderings. STANSET also speeds up drying time.
STANSET imparts lasting shrink resistance and has no adverse affect on light fastness. It will not affect your whites and it has superior non-yellowing characteristics. You will find low chlorine retention with these resins.
STANSET can make your finishing operations more profitable. If you would like to receive additional information about all the excellent characteristics of STANSET—just write us today. No obligation, of course.
STANDARD CHEMICAL PRODUCTS, Inc.
HOBOKEN, N. J. · CHARLOTTE, N. C.



The ALDRICH HIGH COMPRESSION CALENDER

1. Diaphragm air cylinders, without pistons or stuffing boxes, apply accurately adjustable pressures up to 12,000 pounds on the calender rolls.

2. Meehanite calender rolls, which are stronger than grey cast iron, and smoother, since there are no blow holes in Meehanite castings. These rolls are carried on roller bearings, made to fit standard calender rolls with full-sized journals to permit easy installation and provide maximum carrying capacity.

3. Valve which releases pressure on the rolls *each* time the calender stops. This is very important on some synthetics.

4. Pneumatic Lap Pin Extractor which applies a pull of 800 pounds to the pin to remove it from the densest lap.

AldricH MachinE WorkS
Greenwood, South Carolina

When you think of Ring Travelers keep NATIONAL-STERLING in mind!

Even if you think the travelers you are now using are adequate, it will pay you to consider the advantages of National-Sterling Ring Travelers. Here's why.

If you're like most mill men, you've learned to measure traveler performance in terms of yarn quality and pounds produced. And that's where National-Sterling Travelers pay off! In mill after mill — on job after job — National Travelers consistently deliver more pounds of first class yarn, at higher spindle speeds, with fewer ends down. Why not prove it for yourself?

Make it a point to let an experienced National-Sterling Engineer help you select the *right* travelers for your particular spinning or twisting operation. Write, wire or phone National Ring Traveler Company and Sterling Division, 354 Pine Street, Pawtucket, R. I. Southern Office and Warehouse: P. O. Box 293, Gaffney, S. C.

NATIONAL *Sterling*
RING TRAVELERS

F. L. CHASE, JR., *Pres. & Treas.* **L. E. TAYLOR,** *Southern Mgr.*

FOR SPINNING AND TWISTING ALL NATURAL AND SYNTHETIC FIBRES

There's a NATIONAL man nearby!

H. B. ASKEW	**T. H. BALLARD**	**F. S. BEACHAM**	**H. A. CARTER**	**D. C. CREECH**
P. O. Box 424	112 N. 9th St.	P. O. Box 511	354 Pine St.	P. O. Box 5083
Griffin, Ga.	Belmont, N. C.	Honea Path, S. C.	Pawtucket, R. I.	High Pt., N. C.

Export Agent: **A. M. ROMERO CORP.,** 350 Fifth Ave., New York 1, N. Y.

Personal NOTES ABOUT MEN YOU KNOW

William H. Michael, superintendent of Delaware Mills, New Castle, Del., has been elected vice-president in charge of manufacturing. Mr. Michael has been active in the development of Turbo high bulk Orlon, from the laboratory stage to large scale production.

James Wilson has retired as president and director of Forstmann Woolen Co., Passaic, N. J. He will continue as a consultant for the firm and its subsidiaries and in the field of fabric development.

Joseph G. Shedd, general manager of manufacturing, has been elected a vice-president of Fulton Bag & Cotton Mills, Atlanta, Ga.

Clyde L. Parham, superintendent of the Brandon Mill unit of Abney Mills, has been named president of the Greenville (S. C.) Textile Club. **W. G. Humphrey,** superintendent of Judson Mills, was elected vice-president.

Thomas O. Moore, vice-president and general counsel of P. H. Hanes Knitting Co., Winston-Salem, N. C., has been named vice-chairman of the board of directors. At the same time, **Robert A. Lambertson** was advanced from vice-president to senior vice-president. Mr. Lambertson will retain the duties of treasurer. * * * **Joel A. Weston** has been appointed to the newly-created position of vice-president in charge of operations at P. H. Hanes Dye and Finishing Co. At the same time, **Paul N. Wood** was named plant manager.

Edwin P. Madsen has been elected to the post of treasurer of F. C. Huyck & Sons. Mr. Madsen will work in Huyck's New York executive offices.

C. Eugene Coke, Courtaulds (Canada) Ltd., Montreal, was elected president of the Institute of Textile Science, Inc., at the second annual meeting recently. Other officers were: **A. Greyborn,** Bruck Mills, Ltd., Cowansville, Que., treasurer; and **R. D. Bennett,** Du Pont Co. of Canada (1956) Ltd., Montreal, secretary.

Carl S. Kincaid has been chosen chairman of the board of Magnet Mills, Clinton, Tenn. **A. D. Crenshaw** was elected to succeed Mr. Kincaid as president.

pour yourself an extra measure
of cleaning power
for every detergent dollar you spend!

Nacconol® SL

LARGEST SELLING LIQUID DETERGENT FOR TEXTILES!

Why? Because cost-conscious buyers know it gives them better money-value than most dry products . . . *more cleaning power per dollar* . . . on an active ingredient basis!

And, being a liquid, NACCONOL SL saves production time and costs, too. It's clean, easy to handle and requires no dissolving.

If this kind of two-way economy appeals to you, write for free sample and price quotation today.

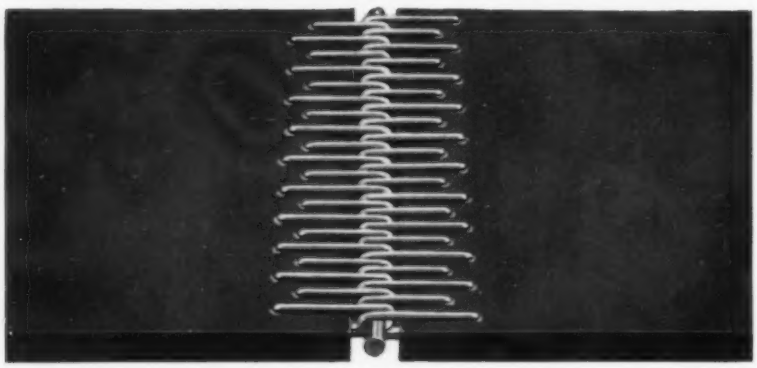
Other forms of NACCONOL for wet processing include NACCONOL NR Flake, and uniform, non-dusting granules NACCONOL DB and NACCONOL DBX. All are minimum 40% active organic products.

Allied Chemical

NATIONAL ANILINE DIVISION ALLIED CHEMICAL CORPORATION • 40 RECTOR STREET, NEW YORK 6, N. Y.

Akron Atlanta Boston Charlotte Chattanooga Chicago Greensboro Los Angeles New Orleans Philadelphia Portland, Ore. Providence San Francisco Toronto

PULL LOOSE ENDS TOGETHER WITH CLIPPER Hooks and Lacers



Time is money . . . and you can save time in joining two loose ends with Clipper Hooks and Lacers. They produce secure, smooth joints in minutes embedding hooks flush with the surfaces of pieces joined. When fastening belts, aprons, or ribbons, they provide a flat, flexible joint that rides freely over conveyor rollers. When joining plastics and other rigid materials they produce a firm "hinge" that is as strong as the material itself. In either case, pieces up to 12 inches wide and 13/32 inches thick are laced in one easy operation. So whenever you have a problem that calls for making two pieces one — check with Clipper.

For more information— *Detailed product information and case history examples of Clipper machine-lacing benefits are contained in Bulletin No. 157. Send for your free copy today.*

Ask your Industrial Distributor for Clipper Products

Clipper BELT LACER COMPANY

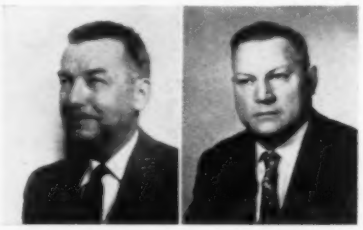
980 Front Ave., N. W., Grand Rapids 2, Michigan

Personal NOTES ABOUT MEN YOU KNOW

H. O. Williams has been elected secretary-treasurer for Adams-Millis Corporation, High Point, N. C., replacing **T. C. Langley** who retired. Mr. Langley and vice-president **L. B. Heilig** were named to consulting positions.

The Kendall Company stockholders have elected **Georges F. Doriot** to serve on the board of directors.

J. William Timperly has been selected for the newly-created position of general manager of the



Mr. Timperly Mr. Kinch

Kenyon Piece Dyeworks, Inc., Kenyon, R. I. **Fred Kinch** has been appointed to fill the post of superintendent, vacated by Mr. Timperly.

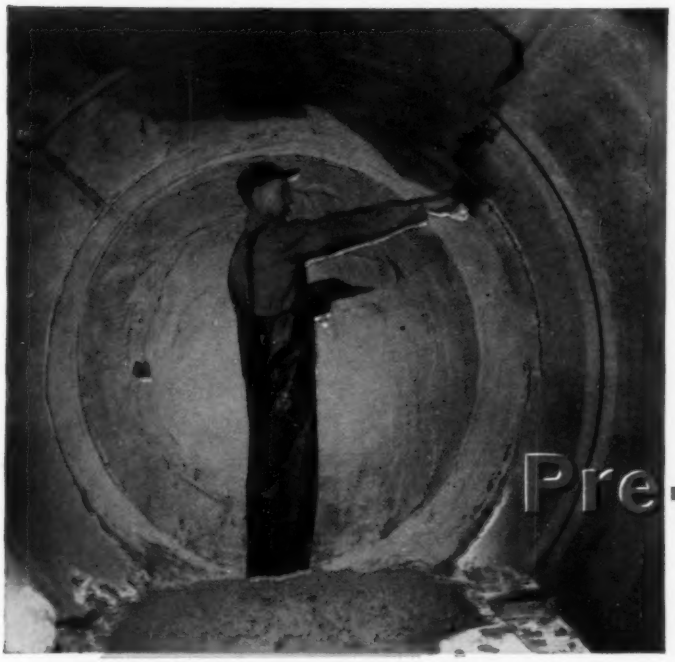
Frank B. Ward has been appointed superintendent of Laurens (S. C.) Mill, succeeding M. G. Wallace who recently resigned.

As a first step toward retirement, **Edward Harris** has resigned his post of executive vice-president of Mount Vernon Mills, Baltimore, Md. He will remain active as a member of the executive committee and will continue to be responsible for cotton purchasing.

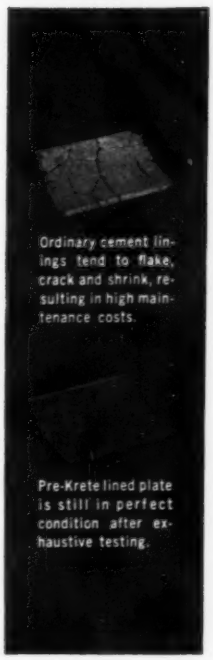
Charles Lovett, Deering, Milliken & Co., Inc., has been elected chairman of the National Federation of Textiles, Inc.'s Warp Knit Fabric Manufacturers Group. **Roy Reubel,** J. P. Stevens & Co., Inc., was appointed to serve as the Group's official representative on the Federation's board of directors. Elected in addition to Mr. Lovett and Mr. Reubel were the following members of the Group's executive committee: **Randolph A. Walker,** Woodside Mills; **Gilbert Cohn,** Lee Dyeing Co. of Johnstown, Inc.; **Seymour Sahlein,** Frank Ix & Sons, Inc., and **George Hein,** Celanese Corp. of America.

James Hibshman, Lion Knitting Mills, has been chosen to serve as

Add years to the life of corroding steel vessels



with special formula C-17 Pre-Krete®


Ordinary cement linings tend to flake, crack and shrink, resulting in high maintenance costs.
Pre-Krete lined plate is still in perfect condition after exhaustive testing.

Pre-Krete is an exclusive, pre-blended, hydraulic cement-base formula, designed primarily for the lining, or re-lining, of storage water heaters and cold water tanks. Its coefficient of expansion is the same as the steel to which it is applied, permitting temperature variations from 0° to 800°F without failure. It is contamination-free and non-toxic, is inert to many chemicals and provides years of corrosion-free service at a small fraction of the cost of a new heater or tank.

See your local Pre-Krete Dealer-Applicator

The P-K franchised dealer-applicators listed here will estimate, without obligation on your part, the cost of Pre-Krete lining your tanks. If you have a maintenance staff that can apply Pre-Krete, your nearest dealer will supply your needs from stock.

Write for Bulletin 1012, which gives the results of independent laboratory tests, together with complete information illustrating how easily Pre-Krete can be applied — with a down time of 48 hours, or less.

pocono fabricators inc.

Division of Patterson-Kelley Co., Inc.
2806 Linton St., East Stroudsburg, Pa.

ALBANY, N. Y.
S. B. Higgens Company, Inc.
Broadway and 25th Street
Watervliet, New York

ALBUQUERQUE, N. M.
Alpha Engineering, Inc.
110 Gold Ave., S.E.

ATLANTA, GA.
S. C. Carter Co.
2639 Birchwood Dr., N. E.

BIRMINGHAM, ALA.
Industrial Mastic Co., Inc.
P.O. Box 1613

BISMARCK, N. D.
Lignite Combustion Engineering Corp.
215-223 Airport Road

BOSTON, MASS.
Fireproofing Corp. of America
413 Bowdoin St.
Dorchester, Mass.

CASPER, WYO.
Construction Specialties Co.
P.O. Box 271

CHICAGO, ILL.
National Coatings Corp.
Hwy. 66 at 1st Avenue
McCook, Ill.

CINCINNATI, OHIO
Frank W. Schaeffer, Inc.
3426 Spring Grove Ave.

COLUMBUS, OHIO
Frank W. Schaeffer, Inc.
635 E. Weber Road

DAYTON, OHIO
Frank W. Schaeffer, Inc.
38 S. Beckett St.

DENVER, COLO.
Construction Specialties Co.
P.O. Box 927

DETROIT, MICH.
M. A. Santoro Company, Inc.
6730 E. McNichols St.

EASTON, PA.
A. McNeil Company
4055 William Penn Hwy.

EAST BETHANY, N. Y.
Frank Daily
R.F.D. #1

ESSEX JUNCTION, VT.
A. B. Higgins, Inc.
27 Park Street

GRAND RAPIDS, MICH.
D. C. Byers Company
3120 Madison Ave., S.E.

HOUSTON, TEX.
M. O. Fulton
P.O. Box 4551

JACKSONVILLE, FLA.
George L. Simonds Co.
P.O. Box 33, Station G

KANSAS CITY, MO.
Anderson-Stolz, Inc.
1727 Walnut Street

KNOXVILLE, TENN.
Boiler Supply Co.
2006 Sutherland Ave.

MIAMI, FLA.
P. Richardson & Son
1047 N.W. 22 St.

MILWAUKEE, WIS.
J. D. Wilson Company
4831 W. State St.

NASHVILLE, TENN.
Boiler Supply Co.
480 Craighead St.

NEWARK, N. J.
McNeil Construction Co.
17 Herbert Place

NEW HAVEN, CONN.
The Thermal Acoustics, Inc.
81 Farwell St.

NEW ORLEANS, LA.
Chas. T. Snow
Edw. A. Horrell
2342 Audubon

NEW YORK, N. Y.
Fireproofing Corp. of America
611 Broadway

OMAHA, NEB.
Boiler Draft Company
3911 Leavenworth St.

PENSACOLA, FLA.
Industrial Mastic Company

PHILADELPHIA, PA.
Metalweld, Inc.
Scotts Lane & Abbottsford Ave.

ROANOKE, VA.
J. J. Bower Company, Inc.
R.F.D. #10, Box 210

SAN FRANCISCO, CAL.
Joseph F. Gisler Company
275 Brannan Street

SCRANTON, PA.
A. McNeil Company
1412 Price Street

SEATTLE, WASH.
Chemical-Proof Corp. of Seattle
625 Alaska Street

ST. LOUIS, MO.
Fleischer-Seeger Co.
4900 Washington Ave.

ST. PAUL, MINN.
The Plum Company
2295 University Avenue

WINTER HAVEN, FLA.
George L. Simonds Co.
Fifth Street, S.W.

HONOLULU, HAWAII
Dearborn Chemical Co.
941 Waimanu St.

TORONTO, CANADA
Sarco Canada, Ltd.
611 Gerard Street, East

Personal NOTES ABOUT MEN YOU KNOW

president of the Cleveland District of the National Knitted Outerwear Association. Others elected were: **David Reinthal,** Bamberger-Reinthal, and **Jerry Frisch,** H. E. Frisch, vice-presidents; **Manny Landers,** National Yarn Co., program chairman; **Adolph Haber,** Standard Knitting Mills, secretary; **Alex Siegel,** Lampl Fashions, treasurer; and **Babe Degryse,** assistant treasurer.

New Bedford Institute of Technology has conferred honorary Doctor's Degrees on **Edmund Rigby,** treasurer of Berkshire-Hathaway, Inc., Providence, R. I.; and **Charles Broughton,** former chairman of the board, Wamsutta Mills, New Bedford, Mass.

Anthony D. Borelli has been promoted to the position of assistant superintendent of yarn manufacturing at the Raeford, N. C., plant of Pacific Mills. **Elbert Morrison** succeeded Mr. Borelli as general overseer, and **Brad Morton** steps into the post of research supervisor vacated by Mr. Morrison.

The Cotton Manufacturers Association of Georgia has elected **W. C. (Bud) Vereen, Jr.,** president of Moultrie (Ga.) Cotton Mills, Riverside

Mr. Vereen

Manufacturing Co. and Riverside Bedding Co., as the association's president for the coming year. **Louis L. Jones, Jr.,** president of Canton (Ga.) Cotton Mills, was named vice-president.

W. H. Ellis is now executive vice-president and general manager of Tryon Processing Co., Tryon, N. C., in which he has acquired a substantial financial interest.

Heyward C. Hurt has been given the responsibility of directing the operations of the newly organized Plant Development Div. of the laboratory at Union Bleachery, Greenville, S. C. Its functions will include the development of new products and processes and the improvement of existing products and processes.

Henry E. Perrin, formerly second hand, is now overseer of finishing at Westerly Woolen Co., Ashaway, R. I.

Five textile industry men have been invested with honorary membership in Phi Psi, professional textile fraternity. They are: **Victor B. Holland,** technical director of research and laboratories, Cannon Mills, Kannapolis, N. C.; **Lloyd O. Koons,** president, Scholler Bros., Inc., Philadelphia, Pa.; **George E. Linton,** dean, Textile Department, Fashion Institute of Technology, New York, N. Y.; **Ernest E. Rettberg, Jr.,** vice-president, Scholler Bros., Inc., Philadelphia, Pa.; and **Prentice M. Thomas,** editor and publisher, *Textile World.*

Warren E. Teixeira, founder of Xeira Textile Designs, has been ap-

(Continued on page 224)

SINCE 1869

"VERYBEST" LOOM NECESSITIES

JACOBS

THE BULLARD CLARK COMPANY

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

NORTHERN DIVISION
Danielson, Conn.

Dixie Bearings, Inc. converts woolen cards to anti-friction bearings... cuts maintenance and lubrication costs . . . increases production!

Chatham Manufacturing Co., Elkin, North Carolina, has realized considerable savings by converting sleeve bearings on woolen cards to anti-friction bearings. DIXIE bearing engineers recommended the bearings best suited for this type of conversion, designed and had produced the fixtures that hold the bearings.

The result is a clean, economical conversion that was quickly installed and is now operating with much less power consumption. Maintenance and lubricating costs are reduced. Production, with better quality, is up!

Ask a DIXIE BEARINGS, INC. engineer to survey your bearing requirements on all mill equipment at no cost or obligation to you. Conversions are a specialty with DIXIE and ample facilities to handle the largest equipment is available.

Call the DIXIE branch nearest you NOW!

Providing bearing service in the South

DIXIE BEARINGS, INC.

FLORIDA: Jacksonville • **GEORGIA:** Atlanta • **KENTUCKY:** Louisville • **LOUISIANA:** Baton Rouge • New Orleans
N. CAROLINA: Charlotte • Greensboro • **S. CAROLINA:** Greenville • **TENNESSEE:** Chattanooga • Kingsport • Knoxville • Nashville

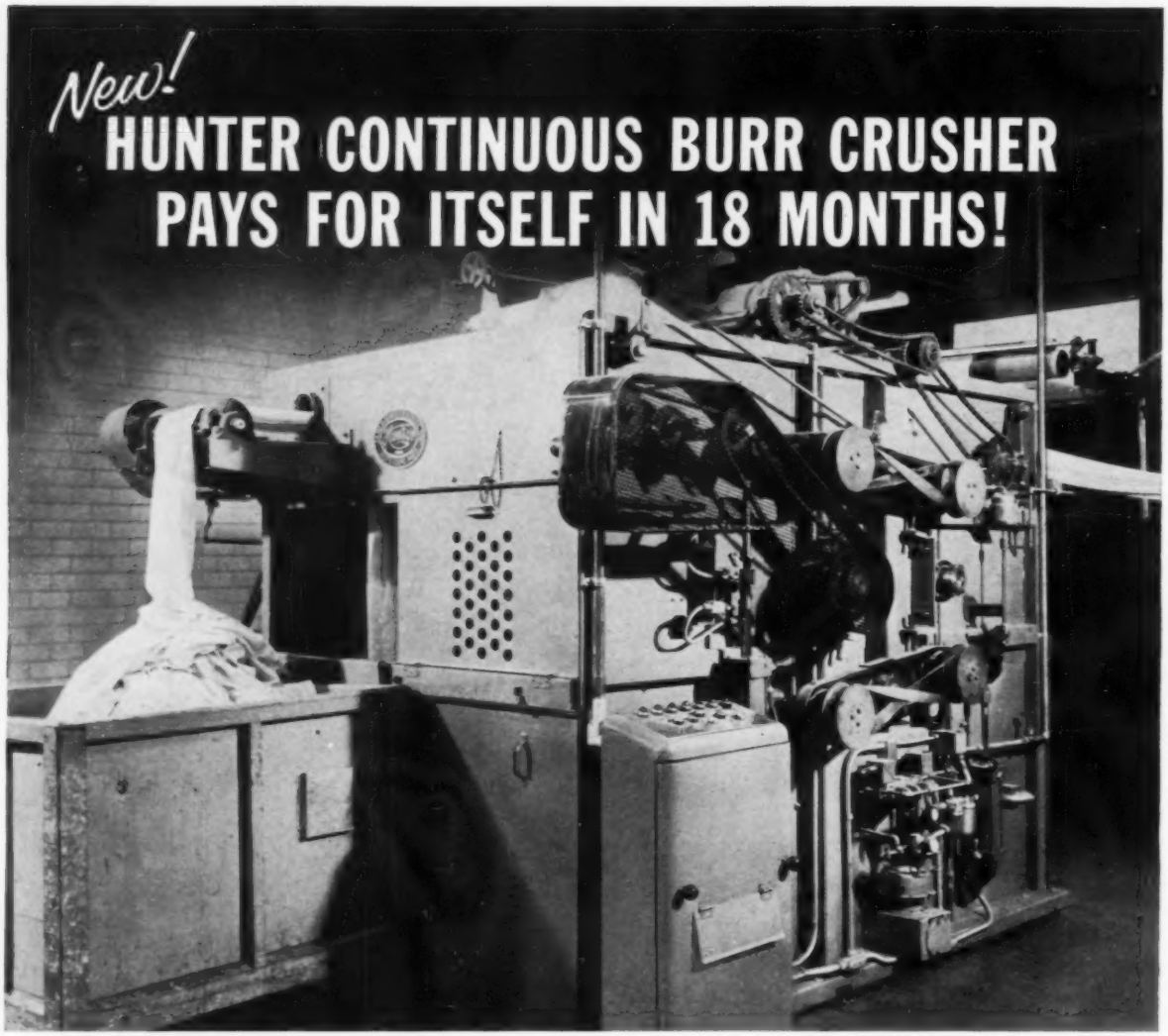
and in the North

BEARINGS, INC.

OHIO: Akron • Canton • Cincinnati • Cleveland • Columbus • Dayton • Elyria • Hamilton • Lima • Lockland • Mansfield • Toledo • Youngstown • Zanesville
INDIANA: Ft. Wayne • Indianapolis • Muncie • Terre Haute • **PENNSYLVANIA:** Erie • Johnstown • Philadelphia • Pittsburgh • York
WEST VIRGINIA: Charleston • Huntington • Parkersburg • Wheeling • **NEW JERSEY:** Camden
NEW YORK: Buffalo, Bolanrol Corp. • **MARYLAND:** Baltimore • **DELAWARE:** Wilmington

New!

HUNTER CONTINUOUS BURR CRUSHER PAYS FOR ITSELF IN 18 MONTHS!



The Hunter Continuous Burr Crusher embodies a completely new operating principle to speed Carbonizer production, and deliver results superior to those obtainable with a batch Burr Crusher. Yet, purchase, operating and maintenance costs represent only a fraction of those associated with conventional Burr Crushers.

NO TIMERS OR RELAYS. The motor runs in *one* direction only. Cloth reversal is entirely mechanical, controlled by pneumatic detectors which bring the cloth into contact with one of two sets of rolls, each running in opposite directions. Reversal is accomplished automatically, when all of the cloth has been removed from either of two scrays, located inside the machine; *costly, troublesome timing mechanisms are entirely eliminated.*

MINIMUM MAINTENANCE. Because of its completely positive, mechanically-activated operation, maintenance of this new Hunter Crush Mill is reduced to a minimum. The cumbersome additional controls usually required for stop-and-reverse drives are eliminated.

LOW OPERATING COST. The Hunter Continuous Burr Crusher's speed is synchronized with that of the Carbonizer, from which it receives cloth directly. Its operation is under the complete control of the Carbonizer operator...and no extra labor is required. The motor uses only a fraction of the horsepower needed to drive conventional dry mills. Savings you can effect through lower operating and maintenance costs can pay the full cost of this unit in 18 months.

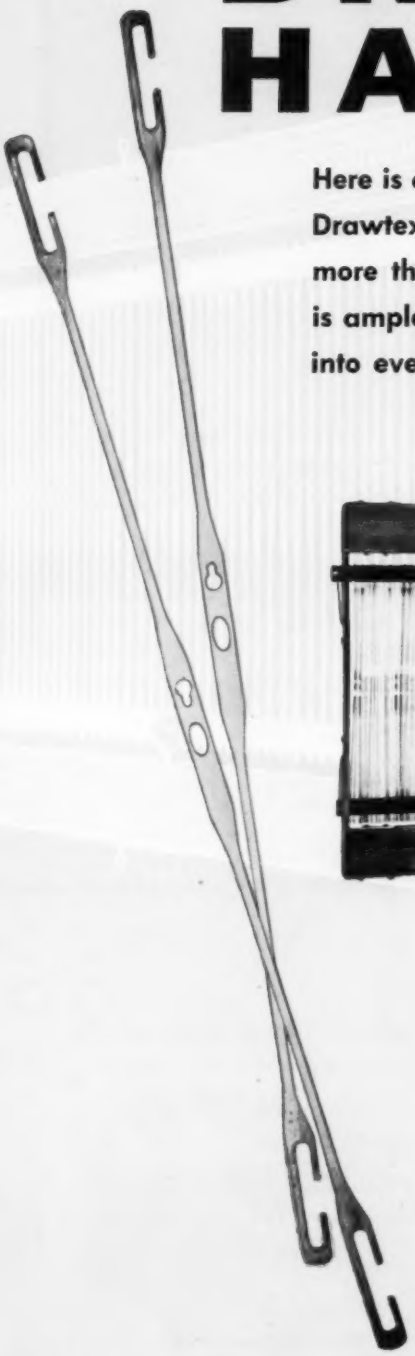
COMPACT, COMPLETELY ASSEMBLED. The entire unit occupies no more space than that required by one batch mill. It is shipped completely assembled and wired, and ready to start delivering new processing savings to you. Write for complete specifications in the new Hunter Bulletin BC.

JAMES HUNTER

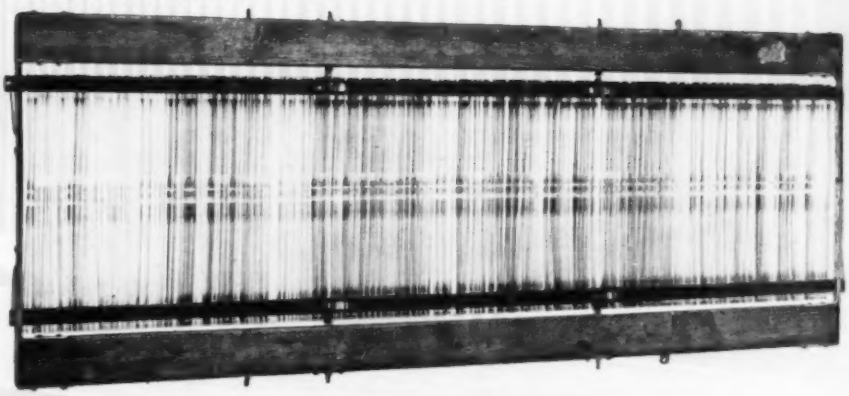
JAMES HUNTER MACHINE COMPANY • NORTH ADAMS, MASSACHUSETTS

Subsidiaries: *James Hunter, Incorporated, Greenville, S. C. • Hunter Fiber Machine Co., Los Angeles, California*
Thomas Leyland Co., Readville, Massachusetts • Hunter Controls, North Adams, Massachusetts

20 TROUBLE-FREE YEARS from this Stehedco DRAWTEX HARNESS



Here is an unretouched photograph of one of the original Stehedco Drawtex Harness Frames with the original Heddles after giving more than twenty years of continuous trouble-free service. Here is ample proof of the fine quality and exceedingly long life built into every Stehedco product.



Ever since the revolutionary Stehedco Drawtex Harness was first introduced it has become increasingly popular because of its exceptional versatility and dependability for increasing loom efficiency and producing better quality goods at lower cost.

Ask our qualified Field Engineers to show you how Stehedco Drawtex Heddles and Frames can greatly improve YOUR production efficiency and economy.

Stehedco
STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.
Southern

F-5731

Other Plants and Offices: Granby, Quebec, Canada — Lawrence, Mass. — Greensboro, N.C. — Atlanta, Ga. — Textile Supply Co., Dallas, Texas — Albert R. Breen, Chicago, Ill.

C.P. Starches...Try 'em for Size

Glass rods dipped into beakers show comparative draining ability and non-congealing qualities of Ten-O-Film, right, and conventional starch, left.

Non-congealing! Free-flowing! Ideal for Warp Sizing!

TEN-O-FILM®

starches

For warp sizing, you'll find TEN-O-FILM Starches a superior product. Ready for use 30 minutes after reaching boil, they remain stable despite prolonged heating and circulating. TEN-O-FILM is unequalled for clarity of film, and fabrics are more readily desized. For detailed information, and technical assistance in adapting TEN-O-FILM to your requirements, contact our nearest sales office, or write to:

CORN PRODUCTS SALES COMPANY
17 Battery Place, New York 4, N.Y.

Corn Products makes these famous starches for the TEXTILE INDUSTRY:
EAGLE® · FOXHEAD® · GLOBE® · CLARO® · TEN-O-FILM® · GLOBE® Dextrines

FOSTER MODEL 102 WINDER

(B) 6" Parallel tube or rigid tube dyeing package.

(C) Warping cone.

(A) Knitting cone.

(D) Spring tube dyeing package.

ONE OF MANY FLEXIBILITY FEATURES

Illustrated above are four different types of packages which may be wound on the Foster Model 102, when it is properly equipped. This is only one feature of the machine's flexibility. Others are as follows:—

1 NINE ANGLES OF WIND from 9° to 18°, simply by changing 4 small gears in the head of the machine. A great asset in these days when types and counts of yarn may be changed overnight.

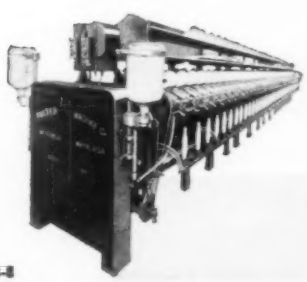
2 ANY CONE TAPER ordinarily used. Furthermore, the gradually increasing taper of Model 102 cones, as they build up, assures free delivery at the knitting machine and equalized tension at all diameters.

3 TRAVERSES — 3" to 7". Machine can be equipped for traverses ranging from 3" to 7". The 7" traverse cone holds 10% more yarn than a 6" traverse cone and is finding increased acceptance in coarse count cotton mills and wool and worsted mills.

4 VARIETY OF SUPPLY ATTACHMENTS, such as tilting bobbin holder for extra long bobbins or paper cops, holders for large spinning package supply and runner reels for winding from skeins.

5 YARN CONDITIONING ATTACHMENT. Optional. Can be readily added at any time. Gives any degree of conditioning desired without reduction in winding speed.

6 VARIETY OF TENSION SLUB CATCHING AND WAXING ATTACHMENTS. All self threading and each designed for a special purpose.



148-B

Flexibility is only one part of the Model 102 story. Find out about its increased production over obsolete machines. Find out why Foster Model 102 cones are "standard for the knitting trade". Send for Bulletin A-95-A.

FOSTER MACHINE COMPANY

WESTFIELD, MASSACHUSETTS, U.S.A.

Southern Office, Johnston Bldg., Charlotte, N. C.

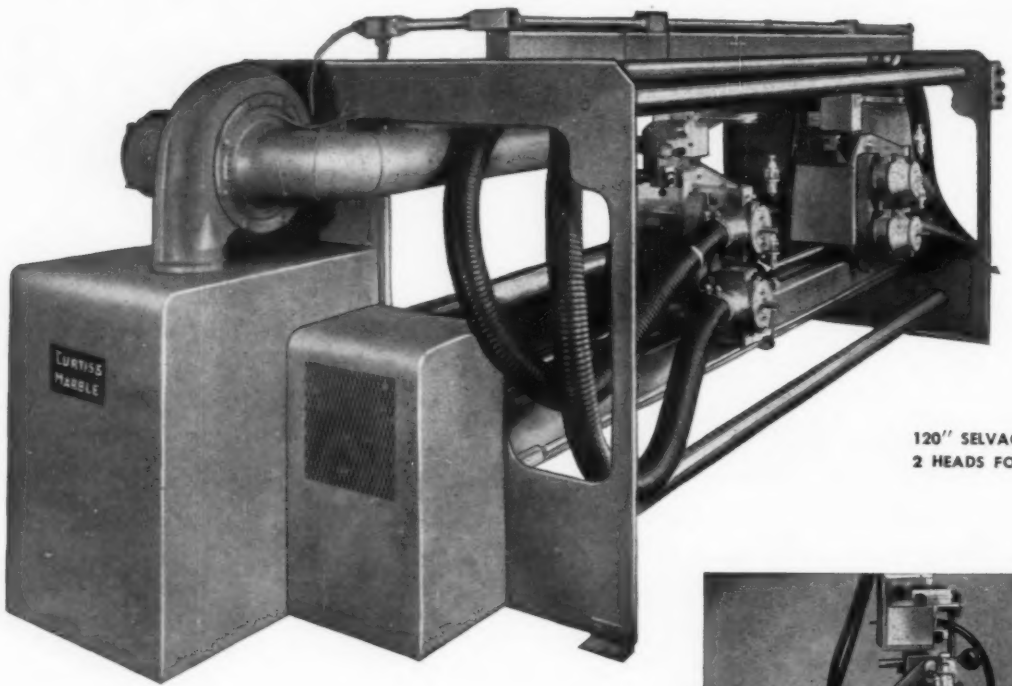
CANADIAN REPRESENTATIVE
ROSS WHITEHEAD AND CO., LTD.
1475 Mountain St., Montreal, Que. and
100 Dixie Plaza, Port Credit, Ontario

EUROPEAN REPRESENTATIVE
MUSCHAMP TEXTILE MACHINERY LTD.
Keb Lane Bardsley, Oldham, England

Trim and remove hanging threads with this

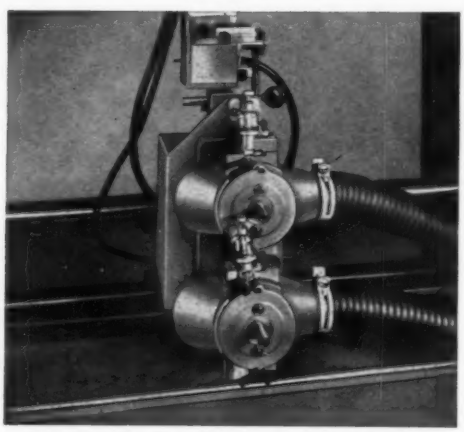
VSS SELVAGE TRIMMER

It quickly pays for itself by ending costly hand labor!



120" SELVAGE TRIMMER WITH
2 HEADS FOR EACH SELVAGE

Processing all weights of fabrics from organdy to blankets, this new high speed Selvage Trimmer also cleans metalized and fiberglas cloth as well as softer fabrics. Handles up to 36" diameter rolls and widths up to 120". Regardless of selvage movement due to width variations caused by uneven winding or tension change, Trimming Heads are instantly guided to selvage by unit positively controlled by photo-electric sensing device operating on the electric eye principle.



Two way adjustable photo-electric sensing device is shown above the two heavy duty vertical shearing heads for trimming one selvage.

CURTIS & MARBLE MACHINE CO.

72 CAMBRIDGE STREET, WORCESTER 3, MASSACHUSETTS

SOUTHERN SALES & SERVICE • GREENVILLE • SOUTH CAROLINA

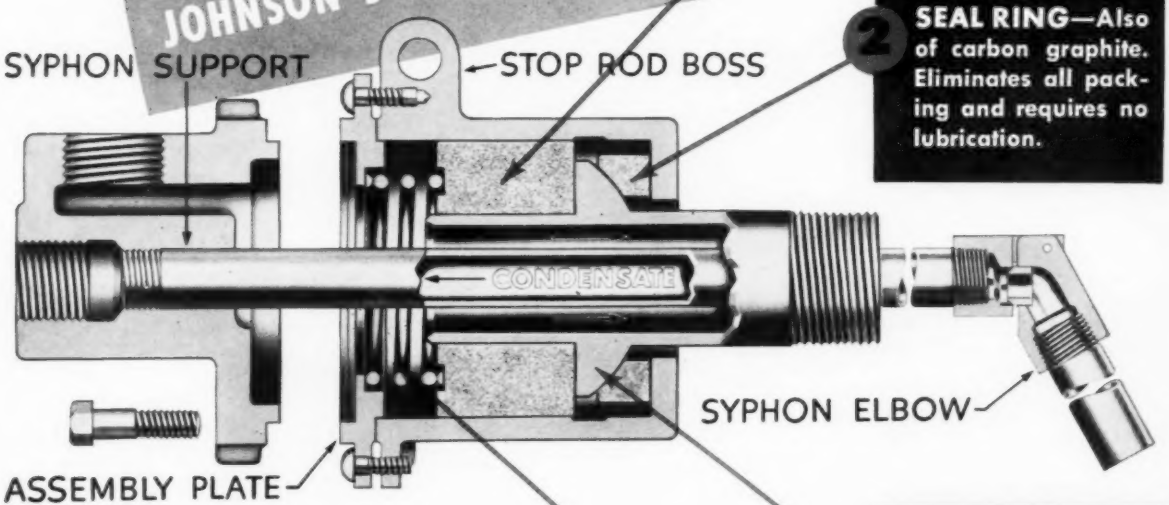
CURTIS & MARBLE MACHINE CO.-HERMAS DIVISION AGENTS

CAROLINA SPECIALTY COMPANY • CHARLOTTE 7 • NORTH CAROLINA

ROSS WHITEHEAD AND COMPANY LIMITED • 1475 MOUNTAIN ST., MONTREAL, QUE. • CANADA

Only 4 INTERNAL PARTS!

TYPE SB2-P JOHNSON JOINT and JOHNSON SYPHON ELBOW



1 GUIDE—Makes the joint self-supporting. It is of self-lubricating, long-wearing carbon-graphite.

2 SEAL RING—Also of carbon graphite. Eliminates all packing and requires no lubrication.

3 NIPPLE—Rotates with the roll, and seals against the ring.

4 SPRING—Serves for initial seating only. In operation joint is pressure sealed.

Notice how straightforward and simple is the design of this Johnson Joint. This unmatched simplicity means fewer breeding places for trouble... simplifies overhaul and repair out in the field. At the same time the joint is completely packless, self-adjusting, self-lubricating and self-supporting.

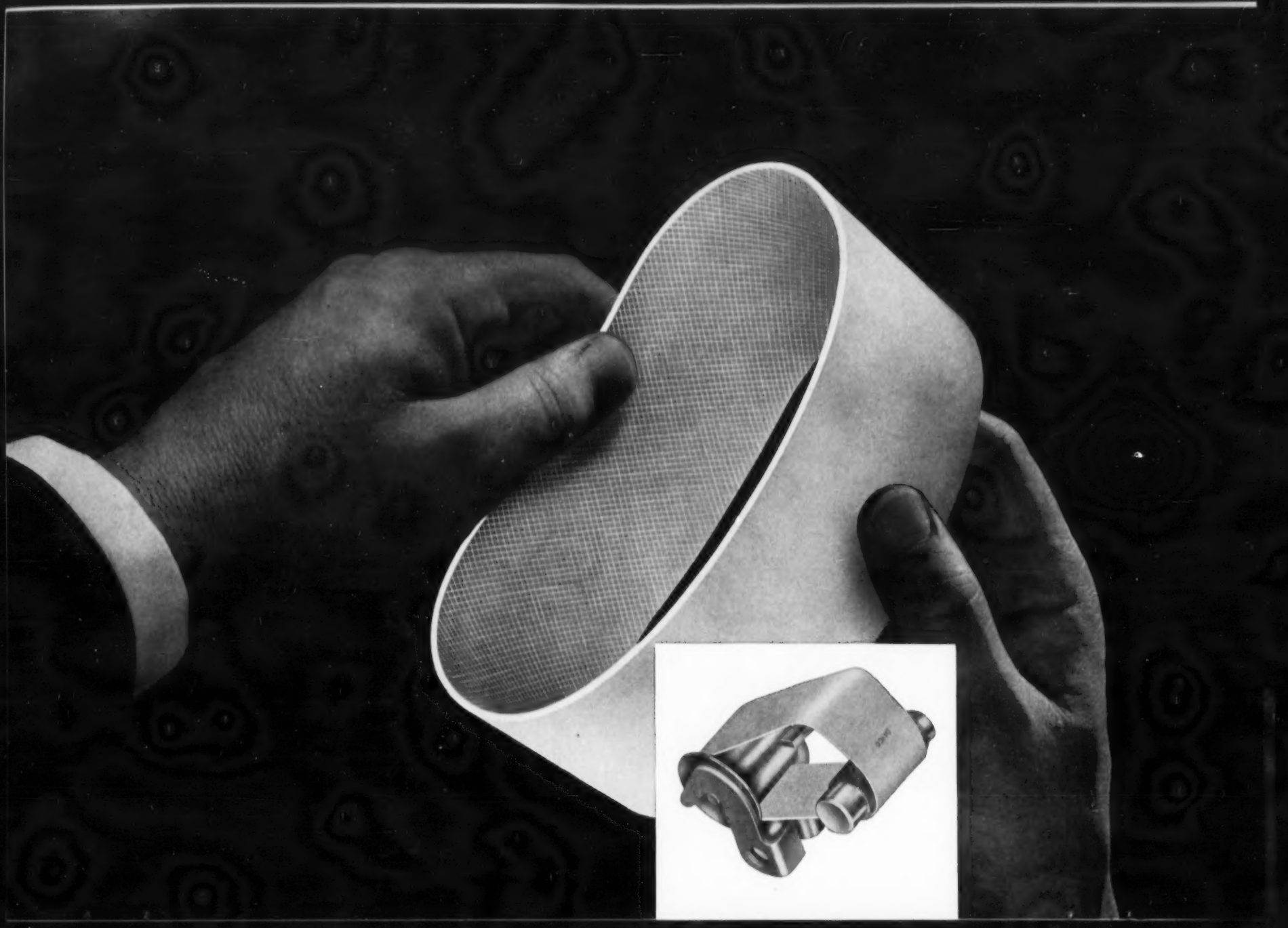
In this Series 3000 Type SB2-P the assembly plate holds the internal parts in position when head is removed. This makes it a perfect teammate for the Johnson Syphon Elbow which can be inserted or withdrawn right through the joint.

Test it yourself—We'll gladly supply a pair of the units shown for 90 day trial right in your own mill; no obligation of course. Write for details and literature.

Products of The Johnson Corporation

815 WOOD ST., THREE RIVERS, MICH.

Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters



Exclusive Dayco Embossed Design

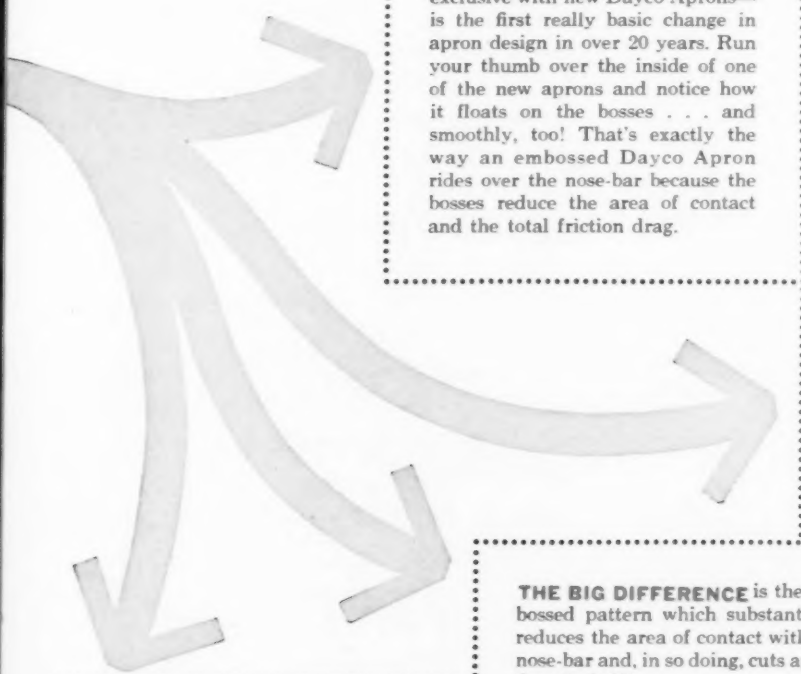
Cuts apron drag in half

On Systems not using fixed centers.

THE EMBOSSED inside surface—exclusive with new Dayco Aprons—is the first really basic change in apron design in over 20 years. Run your thumb over the inside of one of the new aprons and notice how it floats on the bosses . . . and smoothly, too! That's exactly the way an embossed Dayco Apron rides over the nose-bar because the bosses reduce the area of contact and the total friction drag.

First Basically New Design in 20 years

HERE'S WHAT the laboratory reports on the new embossed Dayco Apron . . . "lowest coefficient of friction" . . . "less friction drag than any other apron ever tested" . . . "50% less waste collecting at the nose-bar" . . . "no evidence of chatter or of a tuck forming ahead of the nose-bar."



THE BIG DIFFERENCE is the embossed pattern which substantially reduces the area of contact with the nose-bar and, in so doing, cuts apron drag in half!

While this is the most advanced apron design on the market, Dayco Aprons with exclusive embossed design, are yours at absolutely no extra cost. And, you can order now if you're presently using a size B-60 apron or larger.

NEW IN BASIC CONCEPT and design, Dayco Aprons retain the mill-tested features that have marked Dayco Aprons as the finest available. . . . the pliant, non-stretch cord body . . . the lint-free outer surface. Thus you have the same long wearing, non-glaze surface that's unaffected by extremes of heat and humidity or by oils found in staple fibers.

Equip your frames with the revolutionary new Dayco Aprons, with exclusive embossed design, in sizes B-60 or larger . . . for complete details, write The Dayton Rubber Co., Textile Division, 401 S. C. National Bank Building, Greenville, South Carolina.

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

OVERSEAS PLANT, THE DAYTON RUBBER CO. LTD., DUNDEE, SCOTLAND

BLUE RIBBON Softeners

SOROMINE AT—a white amphoteric softener which may be used both as a softener and a lubricant in thermosetting or thermoplastic resins. Fibers finished with SOROMINE AT have a pleasing full, soft hand.

SOROMINE AL—a white amphoteric softener combined with a special lubricant. It is recommended for improving the sewability and napping qualities of fabrics and threads. It produces a soft, full hand with outstanding lubricity which minimizes needle heating and fiber cutting.

SOROMINE CS — white cationic softening compound, produces a soft, supple hand on all fibers. It has good draping qualities and minimum yellowing properties on storage.

If you are not already using these superior softeners in your finishing operations, we advise that you try them. Send today for free testing samples and complete information on use.

From Research to Reality

ANTARA® CHEMICALS

A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET · NEW YORK 14, NEW YORK

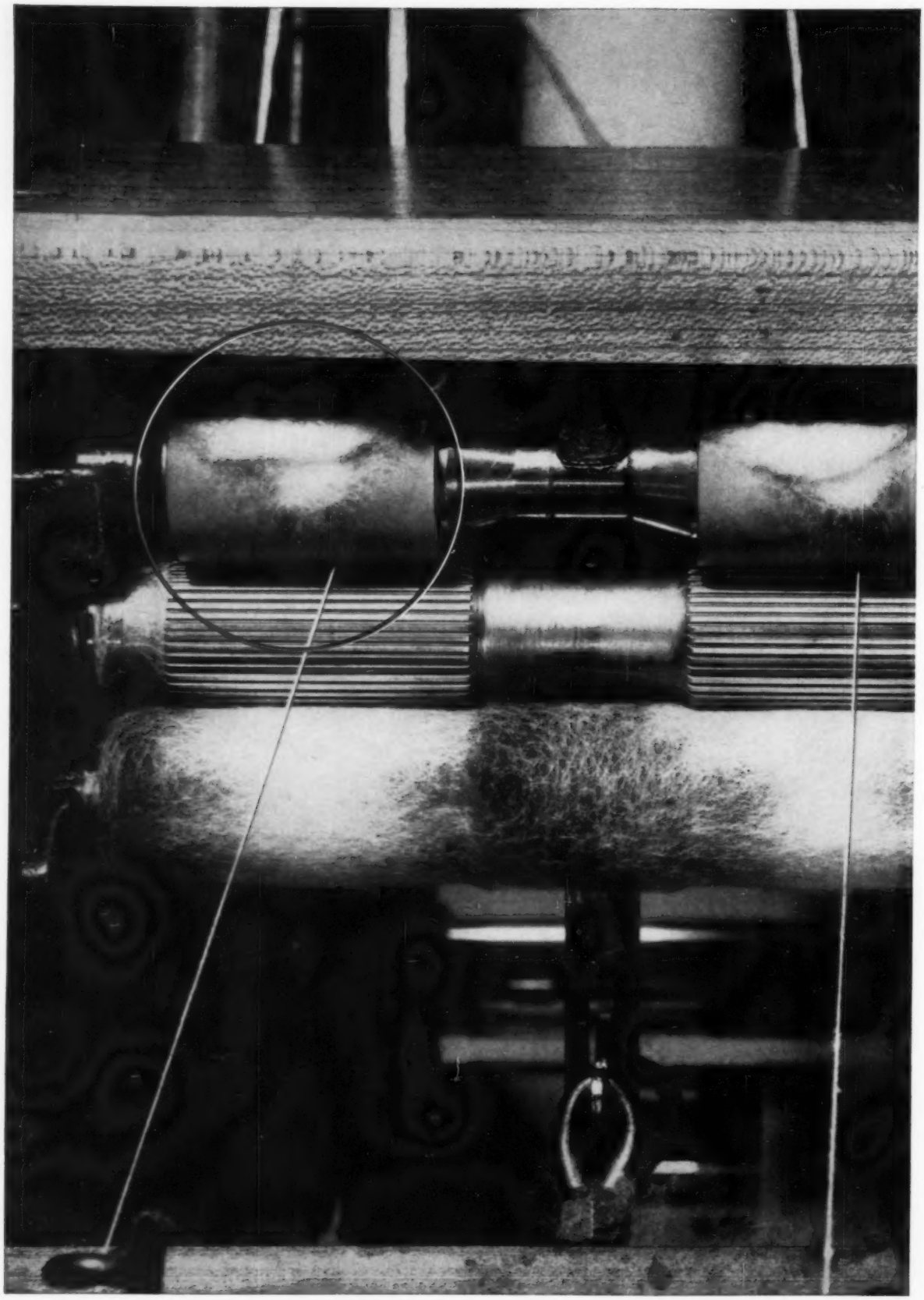
SALES OFFICES: New York • Providence • Philadelphia • Charlotte
Chattanooga • Chicago • Portland, Ore. • San Francisco • Los Angeles
IN CANADA: Chemical Developments of Canada, Ltd., Montreal

SOROMINE manufactured by General Aniline and Film Corporation, is sold outside the United States under the trade name of "BLANDOFEN."

Penford Gums THE **MODERN** WARP SIZING FOR **MODERN** WEAVING

Penford Gums provide exceptional warp yarn protection in weaving all modern fabrics — Cotton, Worsted, Viscose, Acetate, Nylon, Dacron, Acrilan, Orlon, Dynel, Zefran and blends.

There is a Penford Gum that will fit your warp sizing requirements. Penick & Ford Technical Sales Service Engineers will gladly assist you by recommending exact formulations and will provide continuous technical service. Write us today.



eliminate eyebrowing

Accotex anti-static cots help prevent serious eyebrowing and reduce waste formation.

When you see eyebrows forming on your flat clearers, you can usually put most of the blame on the spinning roll. Hundreds of mills have virtually eliminated this problem by equipping their frames with NC-762 Accotex Cots.

NC-762 is one of the new anti-static roll covers developed by Armstrong textile research. This new cot has an exclusive "constant-friction" surface that has just the right amount of bite needed to pick up loose fibers — and pack them well back under the clearers. In addition, many mills report substantial reductions in the total amount of waste formed where NC-762 Accotex Cots are used.

As a result of this superior performance, NC-762 Cots provide maximum eyebrow resistance. They'll help you maintain high production of top-quality yarn by keeping to a minimum yarn irregularities caused by eyebrowing.

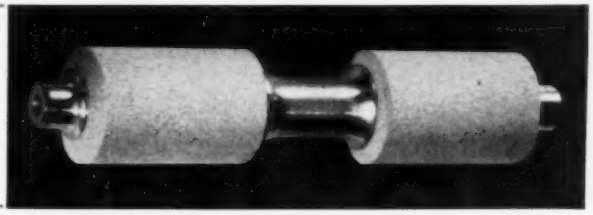
Like all Armstrong roll covers, NC-762 Accotex Cots are compounded to give long service life as well as excellent spinning performance. With just an occasional re-buffing (as seldom as once a year), these covers will turn out clean, uniform yarn shift after shift, for years.

In the card room, Armstrong NC-762 Accotex Covers give the drafting qualities and eyebrow resistance needed for drawing and roving frames equipped with flat clearers.

Whatever type of equipment you have in your mill, and no matter what fiber or blend you're spinning, there's an Accotex Roll Cover to meet your requirements. Your Armstrong representative will be glad to work with you in selecting the roll cover best suited to your work.

For more information on the complete Armstrong line of supplies for textile mills, write to Armstrong Cork Co., Industrial Division, 6506 Ivy St., Lancaster, Pa.

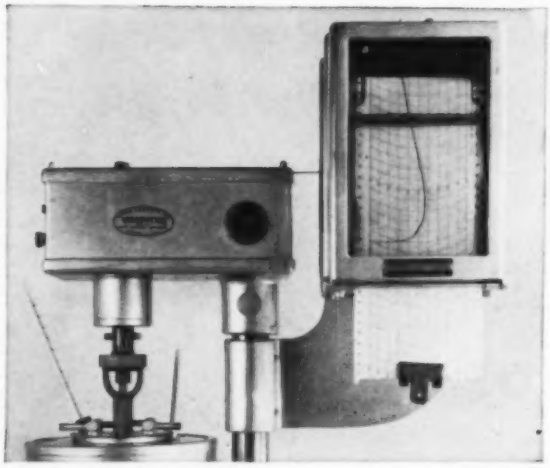
For maximum eyebrow resistance on spinning frames, you can depend on Armstrong NC-762 Accotex Cots. Ask your Armstrong man to arrange a test installation in your mill. Prove on your own frames how these cots perform.



Armstrong ACCOTEX COTS

. . . used wherever performance counts

Quick Course in Starch and Dextrin Buying



1. How does it rate on stability? Viscosity stability is a major factor in warp sizing, particularly under high-temperature conditions—and is essential for uniform added-weight. This characteristic can be accurately evaluated with a Corn Industries Research Foundation Viscometer.

There are nearly 1000 different corn starches and dextrins on the market. Each one does a job. How can you be sure you're choosing the right one? The correct choice depends on many factors. Here's what to look for—how to compare various characteristics—and

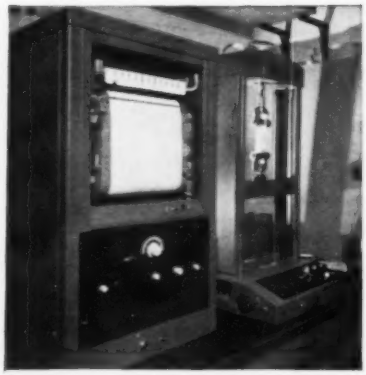
how to select the right starch or dextrin to do the job right!

Here are six of the more important tests for selecting the *right* starch or dextrin.

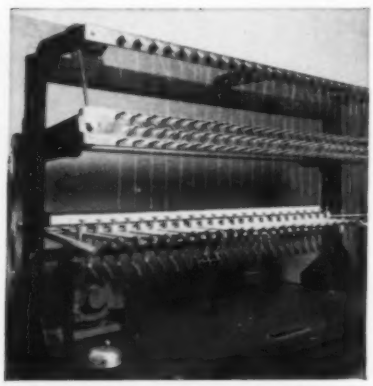
But whether you use these or other methods of testing, remember this: Staley's never-ending research and quality-control laboratories subject every type of starches, gums, dextrins to the most critical tests—not only the tests pictured here, but other demanding tests as well.

The result? A complete line of custom-made, uniform-quality products for sizing and finishing that meet your most exacting specifications.

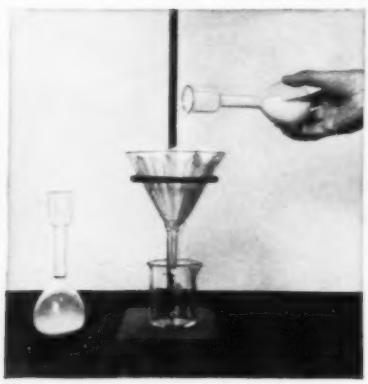
2. Is it the right viscosity? Proper size viscosity is important in almost every application and is a key factor in determining add-on for optimum weaving. The Scott Cup is one of the quickest, simplest, most efficient methods of checking viscosity.



3. What about tensile strength? Important too, is the effect of any treatment on the strength of yarns, fabrics. Tensile strength—ranging from delicate yarns to coarse, durable fabrics—may be determined with the "Instron" Tensile Tester.



4. How does it rate on abrasion resistance? The ability of a sized yarn to resist abrasion during the weaving operation must be carefully evaluated in choosing a starch. The "Walker" Abrader is widely used in this test.

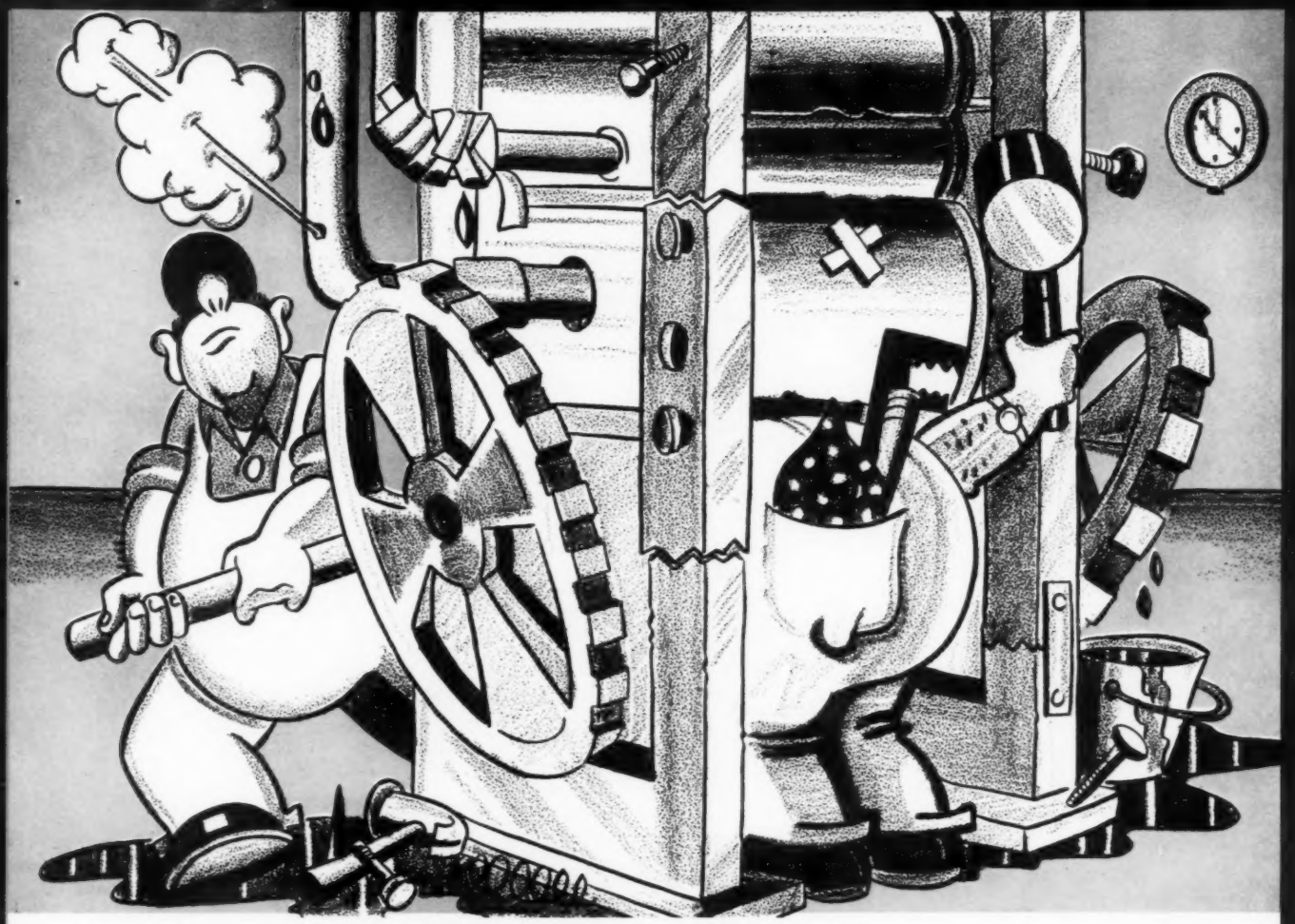


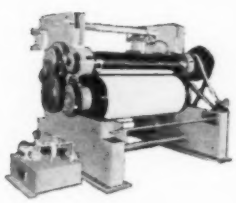
5. Does it have the right solubility? Another important consideration in selecting the *right* dextrin is water solubility. This can be easily determined through a simple analytical procedure utilizing filtration and evaporation.

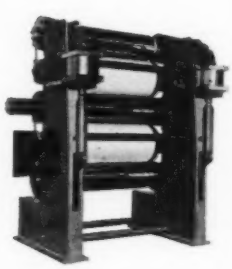
6. How does it rate on color? Generally, dextrins should be of good whiteness when they are to be used in finishing. Precise determinations of color present in dextrins are possible with the "Hunter" Colorimeter, shown above.

A. E. STALEY MFG. CO.
DECATUR, ILLINOIS

Atlanta • Boston • Chicago • Cleveland • Kansas City
New York • Philadelphia • San Francisco • St. Louis







THE MILL THAT NEEDS A MODERN CALENDER IS ALREADY PAYING FOR IT

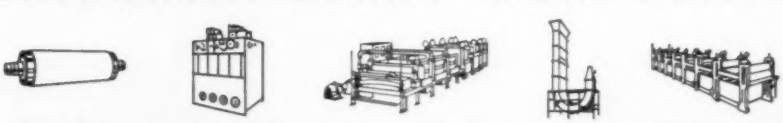
Worn, antiquated calenders skim the cream off your profits by inferior finishes, lower production, greater down time, and higher maintenance.

The profit making advantages of McKiernan-Terry open face calenders have been proven in service by leading finishing plants. You, too, can solve your calendering problems with this modern equipment.

We welcome your inquiries.

MANUFACTURING ENGINEERS · McK T · ESTABLISHED 1895

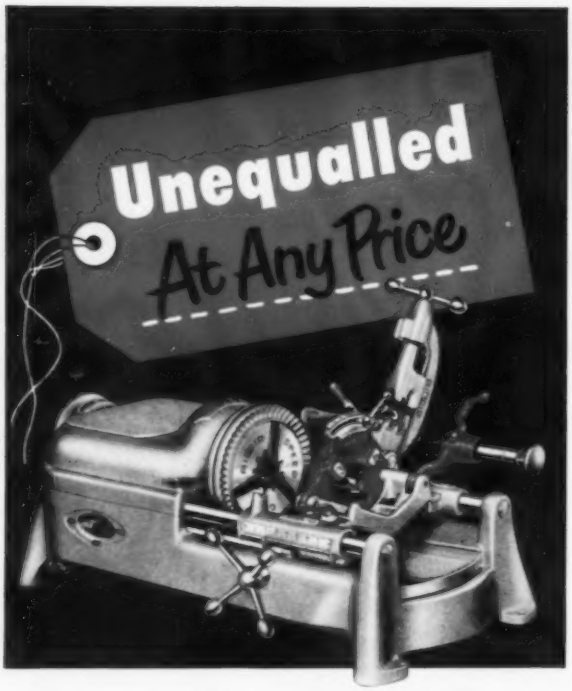
McKIERNAN-TERRY CORPORATION



FILLED ROLLS · MULTI-STAGE WASHERS · CHAINLESS MERCERIZERS · J-BOXES · OPEN WIDTH WASHERS

Textile Machinery Div., Dover, N. J. • Roll Div., Harrison, N. J.

Southern Representative — Industrial Equipment Co., 812 Johnston Building, Charlotte, N. C.



RIDGID

No. 535

Pipe & Bolt Threading Machine Complete with 1 Universal Die Head and 2 Sets of Dies, ½" to 2"...

(Slightly higher in Canada)

Built like a machine tool, designed to thread, cut and ream with speed and ease no other machine offers you. Compare its slip-proof Speed Chuck, front chucking, instant size-change right in carriage, and many other RIDGID features. It pays you to see and try this most-for-your-money 535 at your Supply House before you decide.

The Ridge Tool Company, Elyria, Ohio, U.S.A.

***work*... says "Mark-O-Merit"** ®

moves *faster*

when you use...

Shamrocks

Let a Shamrock representative check your plant. His constant contacts with mill operations can prove helpful to your problems.

Your Shamrock representative is a trained *specialist* in the application of Shamrock Canvas Baskets and Trucks to varied plant operations. He can help in suggesting efficient work flow systems—using standard or made-to-order Shamrock styles to fit your particular plant needs. *Get his helpful advice!*

Shown above is the Shamrock No. 19 Truck, leather reinforced around top rim and at ends of strips; this Shamrock is being used for transporting yarn on cones. For complete information, write direct or contact nearest sales office listed below. MEESE, INC., Madison, Indiana.

SALES OFFICES: NEW YORK—F. R. Tyroler, 55 West 42nd St., PE 6-0615; ATLANTA — W. E. Petway, 723 Densley Dr., North Decatur, Ga., ME 6-3192; FORT WORTH — V. M. Hooton, 4220 Normandy Road, Tel. JEfferson 6-6564; WEST COAST — Petersen-Daniels, Inc., 3311 Beverly Blvd., Montebello, Calif., RAymond 3-7003. Export Mgr. — R. A. Auerbach, Easton, Pa., Cable Address: "Natly."

SHAMROCK

canvas baskets • hampers • trucks

Sales blossom
in brilliant prints
with National® Dyes
Color in bright, splashy prints is one of fashion's best salesmakers!
But whether prints, yarn-dyed fancies or glowing solid tones are in vogue, National Aniline should be your first call for help in reproducing wanted shades.
Ten Application Service Laboratories and experienced representatives are nearby, ready to lend expert technical assistance when needed. With constantly improved dyes and processing techniques developed by our Research and Engineering Center, they can help you sell more with color.
Allied Chemical
NATIONAL ANILINE DIVISION ALLIED CHEMICAL CORPORATION • 40 RECTOR STREET, NEW YORK 6, N. Y.
Akron Atlanta Boston Charlotte Chattanooga Chicago Greensboro Los Angeles New Orleans Philadelphia Portland, Ore. Providence San Francisco Toronto

The Cocker Multiple Beam Tricot Warper

Head Diameters up to 32″

Versatile

2 – 21 inch beams
1 – 42 inch beam
1 – 55 inch beam
1 – 50 inch Raschel beam

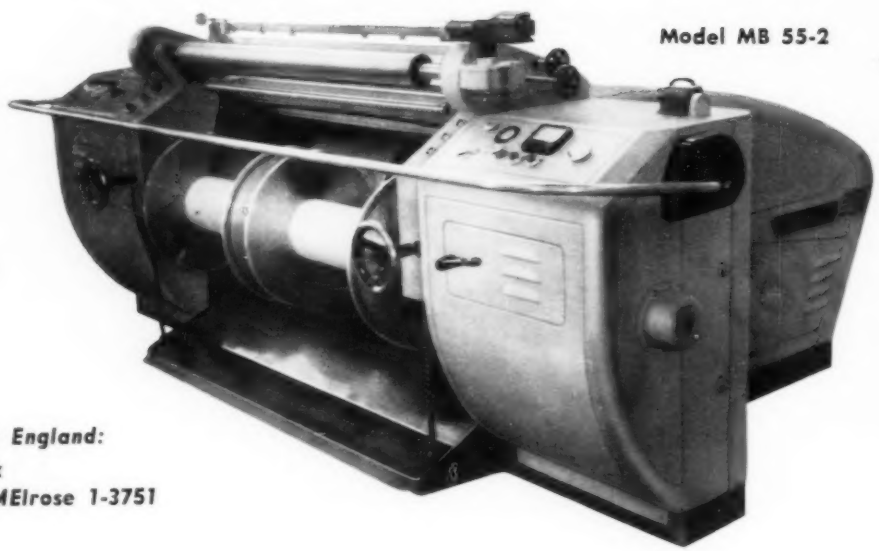
Fast

Normal sustained operating speeds up to 600 YPM.

Convenient

Individual controls are within full view and easy reach of operator. Simple changeover from one set-up to another. Has all of the most modern features and safety devices.

Model MB 55-2



Let us give you full information on this revolutionary Tricot Warper.

In Canada and New England:
Contact W. S. Clark
Montreal, Canada, MElrose 1-3751

THE LEADER AROUND THE WORLD
COCKER Machine and Foundry Co., Gastonia, N. C.

Plant and Offices: Ranlo, N. C. Mailing Address: Gastonia, N. C.

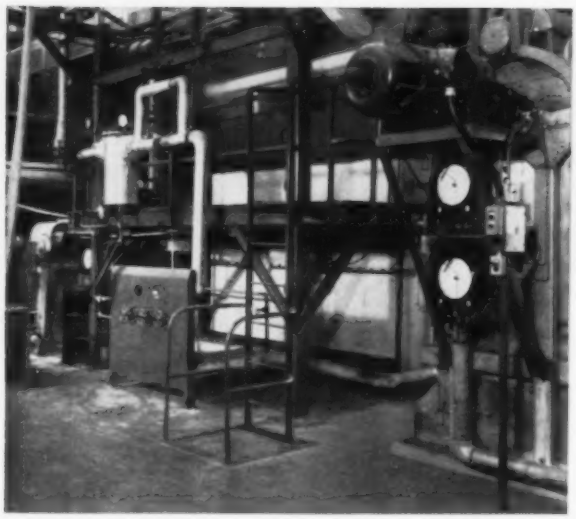
WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

There's great efficiency and economy in using Stymer S. There's non-souring stability that permits large batches to be made up at one time. And easy complete de-sizing of even long-stored cloth. There's no gelling in the size box, no build-up on cans. Leasing in size is standard practice. Investigate this unusually uniform, tough and flexible size for filament acetate and viscose. Get the cost-saving facts from your Monsanto representative. And ask about the other fine Monsanto textile agents: Resloom-finishing resins; and AC Catalysts for fast uniform curing. For technical data and samples, write Monsanto Chemical Company, Plastics Division, Room 482, Springfield 2, Mass.

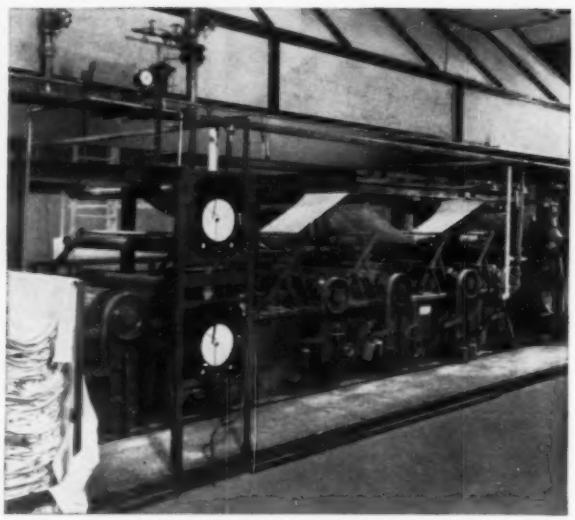
Monsanto

*RESLOOM, STYMER REG. U.S. PAT. OFF.

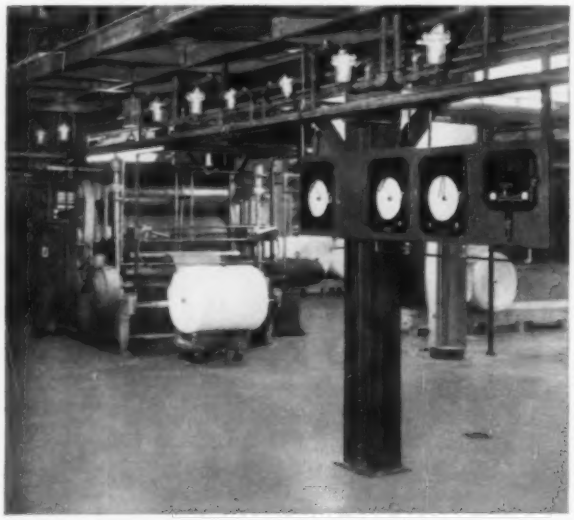
EVERYWHERE YOU



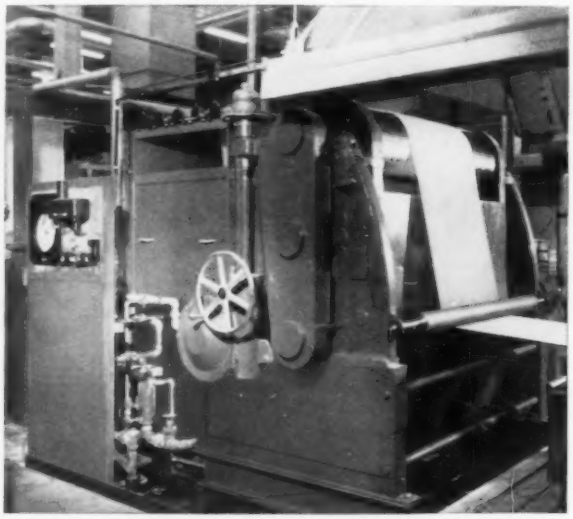
1. "J-Box" temperature, crucial to quality, is maintained at a constant 210°F by careful control of steam supply. A TRANSAIRE* Temperature Transmitter and a FULSCOPE* Recording Temperature Controller on each "J-Box" throttles the steam supply and measures heel temperature.



2. Boil-off range control for open width preparation. Open width fabrics are treated with hot caustic soda, controlled by a Recording Temperature Controller. Flow of hot water for washing is regulated by Flow Controllers, coupled with Differential Pressure Transmitters.



3. Multi-purpose dye range is suitable for dyeing vat, sulphur or napthol colors continuously. Pad Box, Williams Unit, Chemical Boxes and Air Dryer temperatures, and hot water and chemical flow, are all controlled by FULSCOPE Recording Controllers. Level is regulated by an Indicating Controller.



4. Caustic strength is precisely maintained before mercerizing by a Differential Pressure Transmitter and a Recording Controller. Hot water flows are controlled by Flow Transmitters coupled with Recording Controllers.

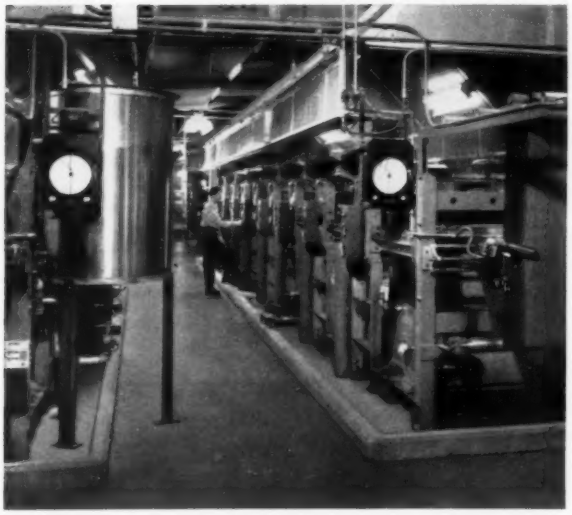
Taylor Instruments

LOOK AT CARLISLE

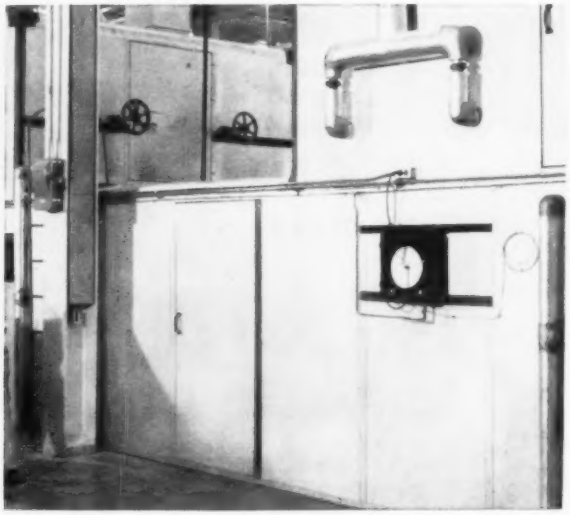
. . . you'll find Taylor Automatic Controls

Carlisle Finishing Co., Cone Mills' new plant at Carlisle, S. C., is the newest and most modern textile printing plant in the South. And a Taylor automatic control system controls practically every process in the plant. To increase their productivity while maintaining the high quality of product for which they are famous, Carlisle relies on Taylor controls to coordinate all ranges of production. And they know from experience that accurate, dependable Taylor control systems will keep their water, steam and chemical costs to a minimum.

The Taylor name is famous in the textile industry. Scores of satisfied companies have used Taylor instruments and control systems in hundreds of different applications. Perhaps your Taylor Field Engineer can help with problems in *your* plant. Call him direct, or write Taylor Instrument Companies, Rochester 1, N. Y., or Toronto, Ontario.



5. Hot water flow during soaping phase is controlled by Temperature Transmitters and Recording Controllers. Temperature control on wash boxes is by FULSCOPE Indicating Controllers, with Pressure Controllers to limit steam pressure to 15 pounds for safety.



6. Drying zone controls. Dryer temperatures are controlled by Recording Controllers for each zone or "pent-house" on the tenter dryer, operating the steam supply valves.

*Reg. U.S. Pat. Off.

MEAN ACCURACY FIRST

Booth *Originators of* **SUPR-O-TAPE • SUPR-O-BAND • STRIP-O-MATIC • MICR-O-GRIND**

MANUFACTURERS OF QUALITY CARD CLOTHING SINCE 1892

REDUCE YOUR NEP COUNT

Announcing MICR-O-GRIND*

*Pat. Pending

MILL TESTS SHOW:

Nep count reduced 40%

Blending improved substantially

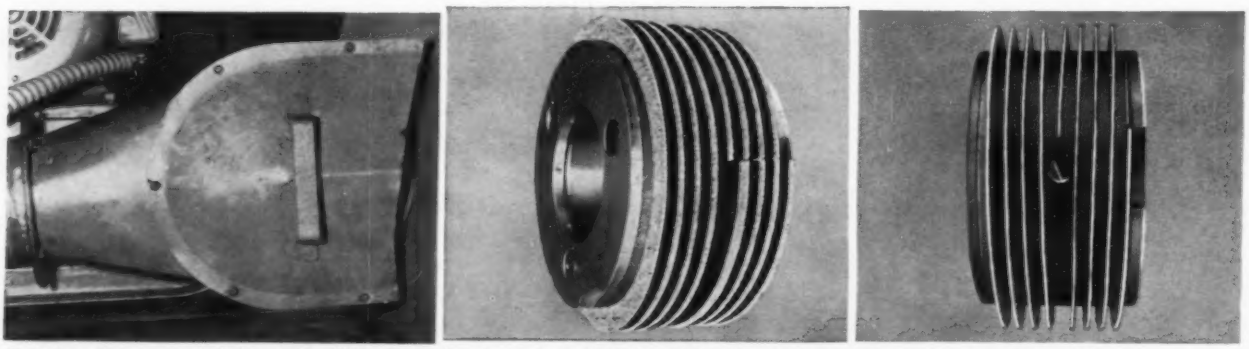
Yarn strength up 10%

Grinding 80% less frequent

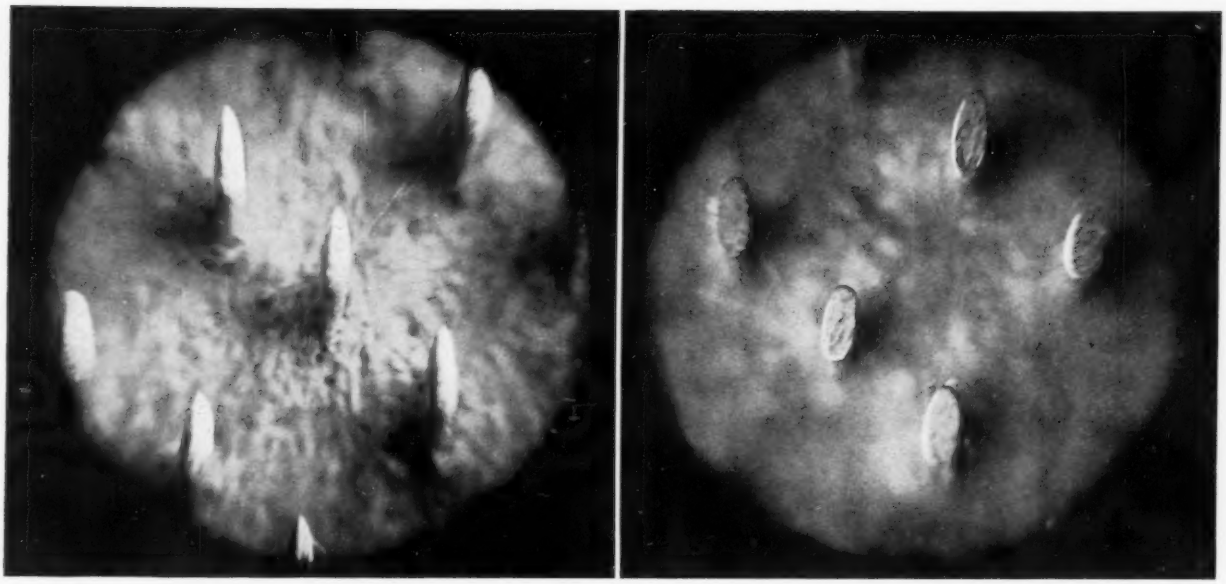
Grinding time less than 30 minutes (normal 6-8 hours)

Stripping 65% less frequent

NEW AND EXCLUSIVE METHOD of putting an extra sharp needle point on the staples of card clothing. MICR-O-GRIND is especially suited for cotton mills and for woolen mills with difficult blends or noily stock.



Grinding discs are spiraled to take off the heel of each tooth. MICR-O-GRIND head fits your conventional grinding shaft.



Note needle point from MICR-O-GRIND (left) compared with conventional flat point (right). Extra sharp MICR-O-GRIND points card out the neps and reduce the nep count as much as 40% on cotton. Sharper points also allow stock to release itself —hence less loading—and also give greatly improved carding action. Stripping of cotton cards only once a shift—on woolen cards as little as once a month.

HOW IT WORKS

Exclusive new MICR-O-GRIND head has spiraled abrasive discs to take off the heel of the wire. This leaves a needle-like point, long recognized as ideal for card clothing.

Never before has this ideal been attained. Conventional grinding invariably leaves a flat point because no way was known to grind the teeth to a perfect point.

IMPROVED QUALITY

The needle point of the teeth holds the fibres long enough to be thoroughly carded and yet does not tear the fibres. This provides a more gentle combing action for increased yarn strength, better blending and reduces neps by as much as 40% in cotton carding.

Needle point is smooth enough to release the stock easily, yet the fine serrations (as seen under a microscope) will not let the fibres escape without being carded. This also means that there is less beating action at the doffer comb as the web flows more readily off the card.

REDUCED COSTS

through reduced Down Time for grinding and stripping. MICR-O-GRIND clothing is very inexpensive—only 5% more. The MICR-O-GRIND needle point can be applied to any type of card clothing—the only difference is the point. In a cotton mill, you can get your standard 100's, 110's, etc., in either CCWC, CWC or rubberfaced foundation—also any woolen clothing.

BENJAMIN BOOTH COMPANY

ALLEGHENY & JANNEY STS., PHILA. 34, PA.

Booth

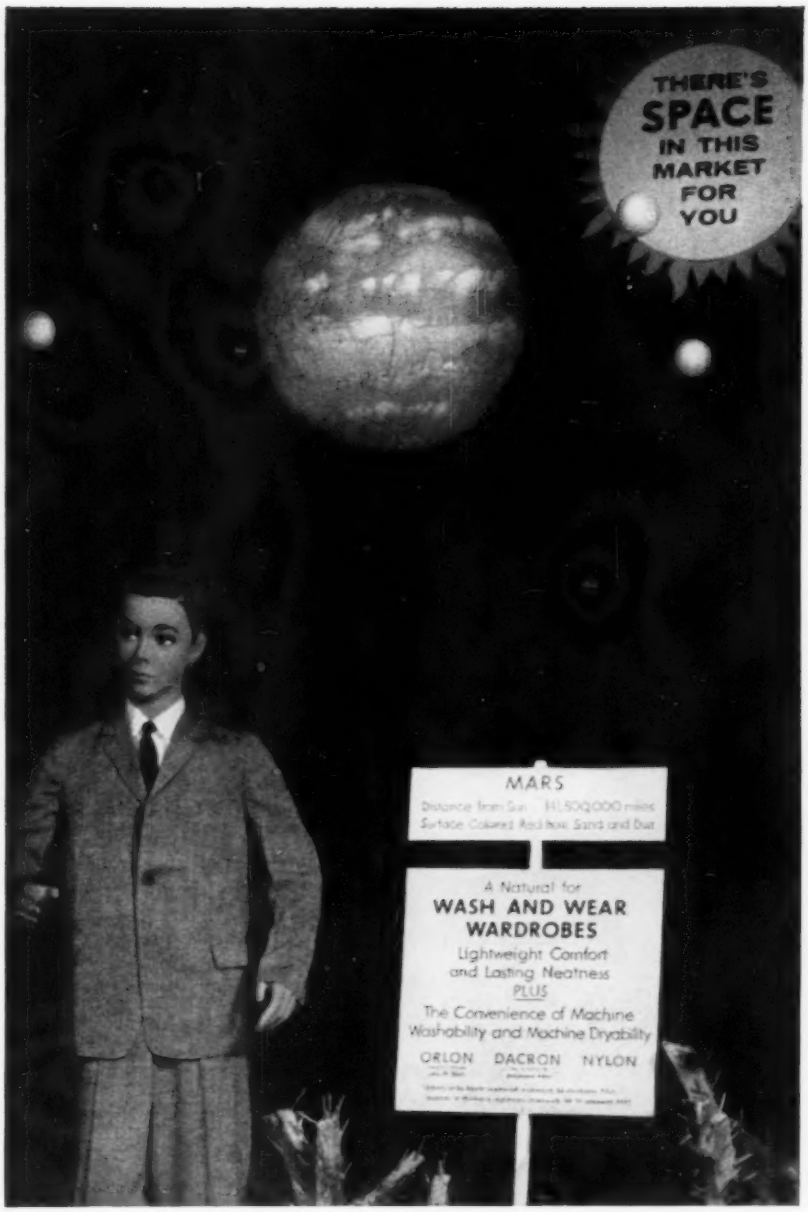
No. 6 in a series—how your Du Pont salesman is backed by many sales-building activities including Fiber Research, Technical Service, Fabric Development and Merchandising.

Du Pont sells ideas

This is Du Pont's exhibit at the recent NARCF Convention in Chicago. On the right is Willard Cole, President of Henry C. Lytton Co., one of Chicago's leading apparel stores. He is discussing Lytton's plans for wash and wear with two Du Pont merchandising men . . . Don Holmes (left), Merchandising Manager for men's wear, and Joe Davidson, Merchandising Specialist in men's furnishings.

Du Pont merchandising representatives are in constant touch with all levels of the textile industry. At trade activities such as the NARCF Convention they promote new ideas that stem from Du Pont's modern-living fibers. Ideas like regular and automatic wash and wear. Ideas that help build new and larger markets for fabrics made with Du Pont fibers.

FROM RAW FIBERS TO RETAIL SALES . . .


THERE'S SPACE IN THIS MARKET FOR YOU
MARS
A Natural for
WASH AND WEAR WARDROBES
Lightweight Comfort and Lasting Neatness
PLUS
The Convenience of Machine Washability and Machine Dryability
ORLON DACRON NYLON

as well as fibers

When skilled merchandising men like Don Holmes and Joe Davidson return to Du Pont, they bring back market reactions. They report facts. Attitudes. Results. Predictions. All of which aids in making your Du Pont salesman the best informed in the industry . . . helps you and Du Pont anticipate new demands, plan broader markets.

Du Pont believes it can increase the market for its fibers and thus benefit its customers by providing useful assistance to all levels of the textile industry. It's through your Du Pont salesman that you, as a customer, have access to a range of technical and merchandising information unique in the textile industry . . . access to the latest in *ideas* as well as fibers and fiber technology.

Product and Process Notes from Du Pont

Du Pont's No. 7 Thick and Thin rayons, formerly produced only in deniers from 100 through 450, are now available in heavier deniers to permit broader application in home-furnishings end uses. These yarns, for example, in 900, 1800, and 2700 deniers, will impart completely new styling effects to drapery and upholstery fabrics.

Fiber stress-strain properties—a new 36-page Technical Information Bulletin (X-82) provides data on the stress-strain properties of eight fibers (acetate, "Dacron"* polyester fiber, "Orlon"** acrylic fiber, nylon, rayon, cotton, silk and wool), under a variety of hot-dry and hot-wet conditions. This research is from the third phase of a broad fiber characterization program sponsored by Du Pont at North Carolina State College. The bulletin also describes how a knowledge of fiber properties can be useful to the mill man and design engineer.

Du Pont announces commercial availability of six new nylon hosiery yarns in response to the industry's intensified efforts to bring new styling and greater variety to women's hosiery. The new yarn counts are as follows:

17 denier: 2 filament	**14 denier: 2 filament**
21 denier: 3 filament	**15 denier: 3 filament**
28 denier: 4 filament	**20 denier: 2 filament**

The addition of these yarns makes it possible for the hosiery manufacturer to increase his range and styling from the sheerest to full service weights.

Nylon on draw-wound tubes improves processing—The use of draw-wound tubes in place of bobbins will improve processing for reverse twist to obtain S and Z plied yarns. These tubes are now available in all deniers.

Technical information bulletins contain detailed, practical information on Du Pont product and process developments. They cover fiber properties, mill processing, dyeing, finishing and fabrication. Refer to your copies frequently; they can save you time and money. To be sure you have all the bulletins you need—check with your Du Pont salesman or technical-service representative.

*Du Pont's registered trademark for its polyester fiber.
**Du Pont's registered trademark for its acrylic fiber.

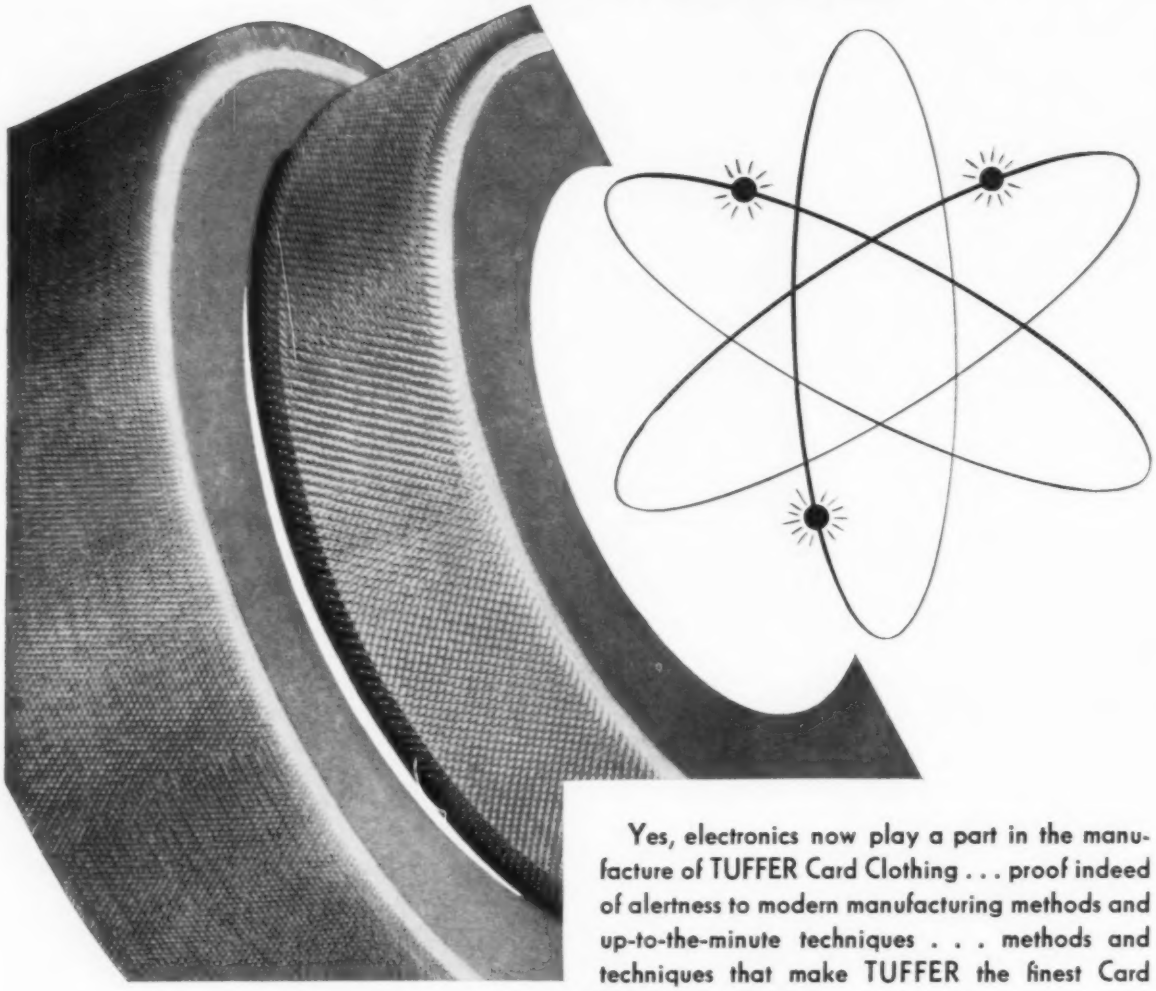
Enjoy the "Du Pont Show of the Month"—on CBS-TV

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT BUILDS PROFITS FOR YOU

and now *Electronics* . . .



Yes, electronics now play a part in the manufacture of TUFFER Card Clothing . . . proof indeed of alertness to modern manufacturing methods and up-to-the-minute techniques . . . methods and techniques that make TUFFER the finest Card Clothing available.

Merely keeping abreast of the times, however, is not our only purpose—our constant intensive research is your assurance for even better Card Clothing for TOMORROW.

Howard Bros. forward-looking and progressive manufacturing policy, plus a vital 92 years of experience in the making of Card Clothing, is your guarantee that you are using the very best when you use TUFFER.

B-3

Manufacturers of Card Clothing since 1866

Tuffer

HOWARD BROS.

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga., Gastonia, N. C., Greenville, S. C.

Direct Representation in Canada

TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing and Brushes • Top Flats re-covered and extra sets loaned at all Plants • Lickerins rewired at Southern Plants • Hand Stripping Cards

There's something special about the new SANDOZ vats!

Now, a new SANDOZ development offers specialized vat colors with the characteristics you need for your application.

Example: for pigment padding, a special group of Sandothrene vat dyes is available in which there's no danger of dye migration. When these SANDOZ vats are padded, they stay where you want them, anchored "in situ" during the entire drying interval.

Example: for package dyeing, Sandothrene Ultrasperse dyes have been proved in chromatographic tests to offer finest particle size, freedom from agglomerates.

Example: for print work, Sandothrene Ultrasperse Printing vat colors, in which the fineness of particle size facilitates flow and makes for good running qualities with greater freedom from roller scratch.

Have you a vat dye problem? Let us help you solve it. Just call or write SANDOZ, INC., 61-63 Van Dam Street, New York 13, N. Y. ALgonquin 5-1700.

District Offices: Charlotte, Cincinnati, Fair Lawn, N. J., Hudson, Mass., Los Angeles, Philadelphia.

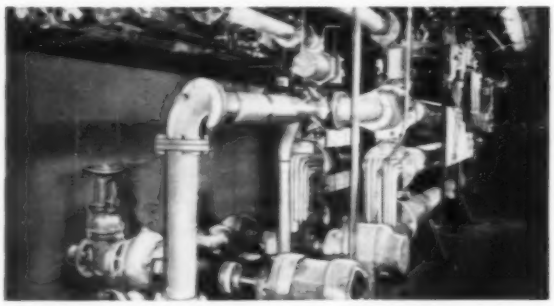
SANDOZ

THINKS AHEAD WITH TEXTILES

SANDOZ

LUDELL'S FORMULA FOR INCREASING PROFITS IN YOUR PLANT*

Important contributions have been made to your industry by the Bready System of Heat Recovery. The efficient preheating of incoming fresh water for process use has been reflected in lower fuel bills, reduced steam demand and increased production with these Systems.



Here's how preheating incoming process water with a Bready System can cut costs, improve production and increase profits for you:

REDUCES WATER HEATING LOAD BY 50% TO 60% AND INCREASES WATER HEATING CAPACITY WITH LESS FUEL COST.
**Example:* Original heating load from 40° to 180°F. Preheating to 120° with a Bready System leaves only 60° rise required by heater, thus making heater capable of increasing volume and still use less steam. With this System you can get the volume of hot water you need, when you need it and at the constant temperature you require.

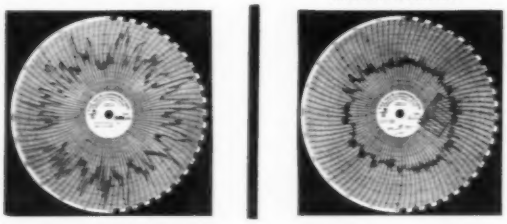
CONSTANT SUPPLY OF HOT WATER MEANS INCREASED PRODUCTIVE CAPACITY.
**Example:* Ample supply of hot water with instant delivery at uniform controlled temperature reduces filling and processing time, gives more rounds per shift and also helps maintain quality standards.

BOILER LOAD REDUCTION INCREASES "SIZE" OF PRESENT BOILER.
**Example:* Boilers must be sized to handle peak loads of plant. The Bready System levels off the peaks and reduces the average steam demand, resulting in less fuel consumption and more efficient boiler operation. This often eliminates the necessity of purchasing another boiler.

CONTINUOUS MAXIMUM HEAT RECOVERY RESULTS IN IMPORTANT FUEL DOLLAR SAVINGS.
**Example:* Temperature rise of incoming water is guaranteed to be continuous with a Bready — not just an initial reading. Value of recovered heat is reflected in lower fuel consumption and increased hot water supply.

STEAM CHART BEFORE
Note surges of peak loads

STEAM CHART AFTER
Note uniformity and reduced demand



BREADY SYSTEMS MAINTAIN THEIR PEAK EFFICIENCY.
Because Bready equipment is automatically self-cleaning, there is no decline in the amount of heat reclaimed. Exclusive, patented continuous tube feature and timed backflushing eliminate plugging and fouling. No mechanical screening devices are required.

TIMED BACKFLUSHING AND CONTINUOUS TUBES
Exclusive self-cleaning feature assures peak efficiency.

TWO VITAL POINTS TO DETERMINE.
Before purchasing any waste heat recovery equipment, find out:

1. Has actual in-plant performance proved equipment will not plug or stop up?
2. Is the system *guaranteed* to recover heat continuously (not just initial reading)?

LUDELL OFFERS BREADY SYSTEMS PURCHASED FROM SAVINGS.
Payments may be established by accurate metering device, if desired, to positively evaluate heat recovered. Terms are arranged to suit your requirements.

IF THIS HEAT RECOVERY PROFIT POTENTIAL IS NOW ESCAPING DOWN YOUR SEWER, NOW IS THE TIME TO ASK LUDELL ENGINEERS TO SURVEY YOUR PLANT TO DETERMINE THE APPLICATION OF A BREADY SYSTEM. THERE IS NO OBLIGATION.

LET US PROVE THAT "OUT OF WASTE . . . COMES PROFIT."

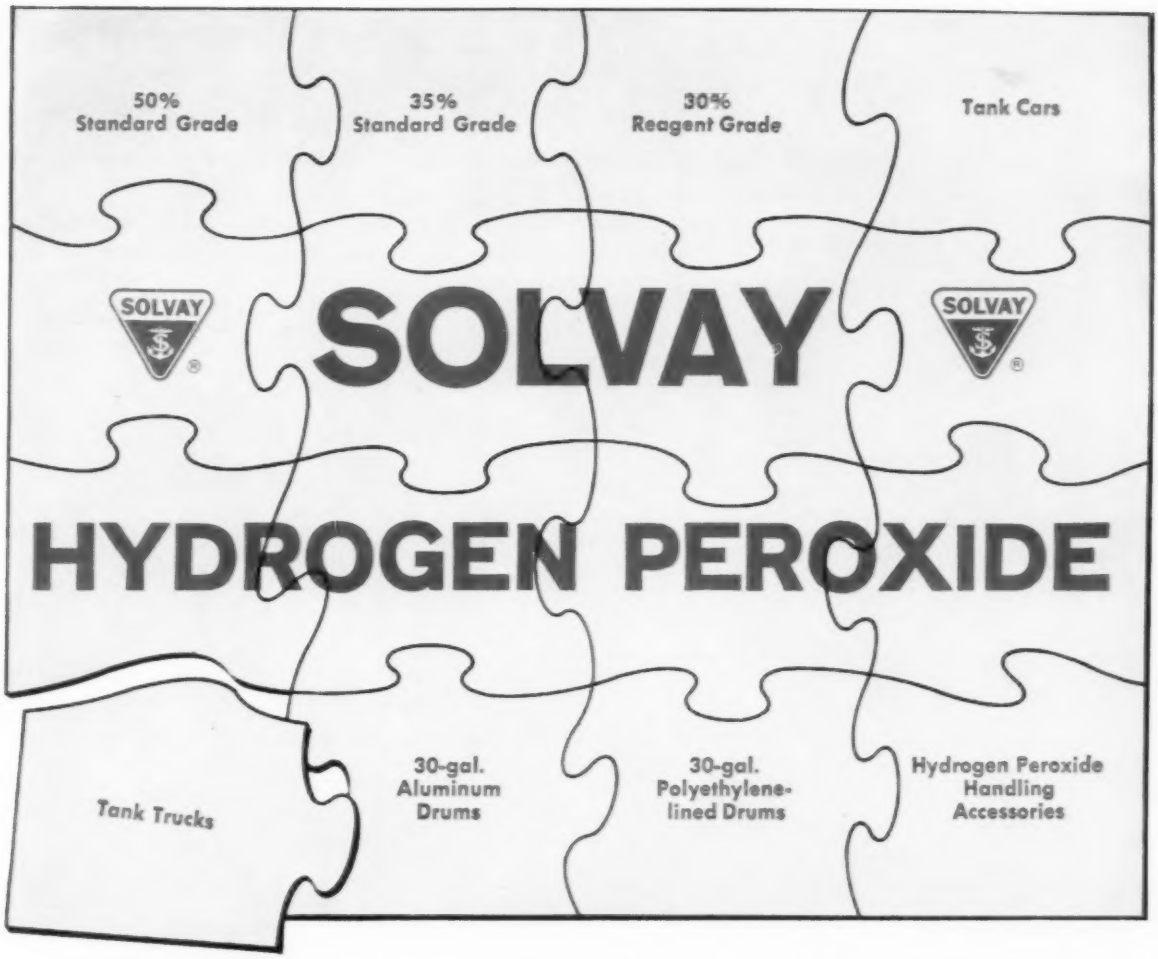
DEPT. T. I.

WRITE FOR ILLUSTRATED BOOKLET. This booklet contains factual information which should be in every plant engineer's data file.

Ludell
Manufacturing Company
5200 West State Street • Milwaukee 8, Wis.
Representatives in the United States, Canada, Alaska

MANUFACTURERS OF BREADY SYSTEMS OF HEAT RECOVERY AND HOT WATER HEATING • WATER HEATERS • STORAGE TANKS • WHEELER SELF-UNLOADING WASHER

© Copyrighted 1958, Ludell Mfg. Co.



. . . well-fitted to meet your needs

SOLVAY is prepared to supply you with hydrogen peroxide in either standard or reagent grades. The standard grades—both 35% and 50% strengths—are packed in 30-gal. aluminum drums, tank trucks and tank cars. The 30% reagent grade is packed in 30-gal. polyethylene-lined drums. SOLVAY is also prepared to supply special Hydrogen Peroxide Technical Service to help you in handling, storage or process applications.

Sodium Nitrite • Potassium Carbonate • Caustic Soda • Chlorine
Calcium Chloride • Sodium Bicarbonate • Ammonium Chloride
Caustic Potash • Chloroform • Vinyl Chloride • Methylene Chloride
Para-dichlorobenzene • Methyl Chloride • Cleaning Compounds
Hydrogen Peroxide • Aluminum Chloride • Ammonium Bicarbonate
Soda Ash • Carbon Tetrachloride • Mutual Chromium Chemicals
Monochlorobenzene • Ortho-dichlorobenzene • Snowflake® Crystals

SOLVAY branch offices and dealers are located in major centers from coast to coast.

Allied Chemical

SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N. Y.

Hydrogen Peroxide Dilution Data Book

Gives complete information on diluting SOLVAY Hydrogen Peroxide to the concentrations you need—plus important facts on handling, stabilizing, storing and analyzing dilute solutions. Mail coupon now for your copy!

SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N. Y.

Please send without cost your book, "Dilution of Hydrogen Peroxide."

Name_____
Position_____
Company_____
Phone_____
Address_____
City_____ Zone____ State_____

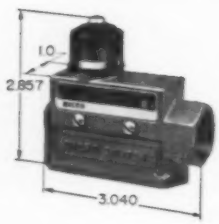
BQ-48

MICRO SWITCH Precision Switches

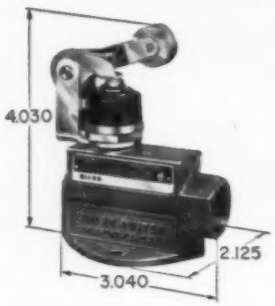
New "E6" and "V6" Enclosed Switches available in 6 actuator designs

With new ease of installation, improved insulation and sealing, heavier wall sections without change of envelope dimensions, these new switches are interchangeable with our "E" and "V" designs.

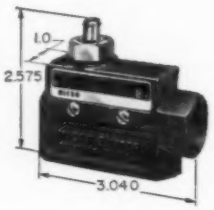
Available in six integral actuator designs to meet most precision switch requirements. All six are available in either side mounting (E6) or bottom mounting (V6) style.



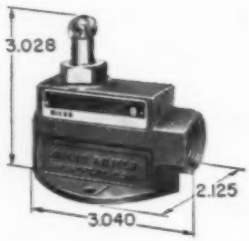
Plunger actuator for straight, in-line operating motion with controlled overtravel. Elastomer actuator boot protects against dirt and moisture.



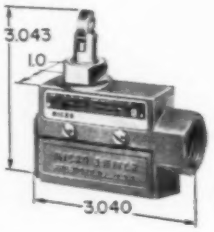
Roller lever actuator for cam or slide motion, adjustable horizontally through 360°, vertically through 225°. Elastomer actuator boot.



Plunger actuator for straight, in-line operating motion with controlled overtravel.



Roller plunger actuator for slow-rise cam or slide motion with controlled overtravel. Roller in line with case.



Roller plunger actuator for cam or slide motion with controlled overtravel. Roller at 90° angle to case.

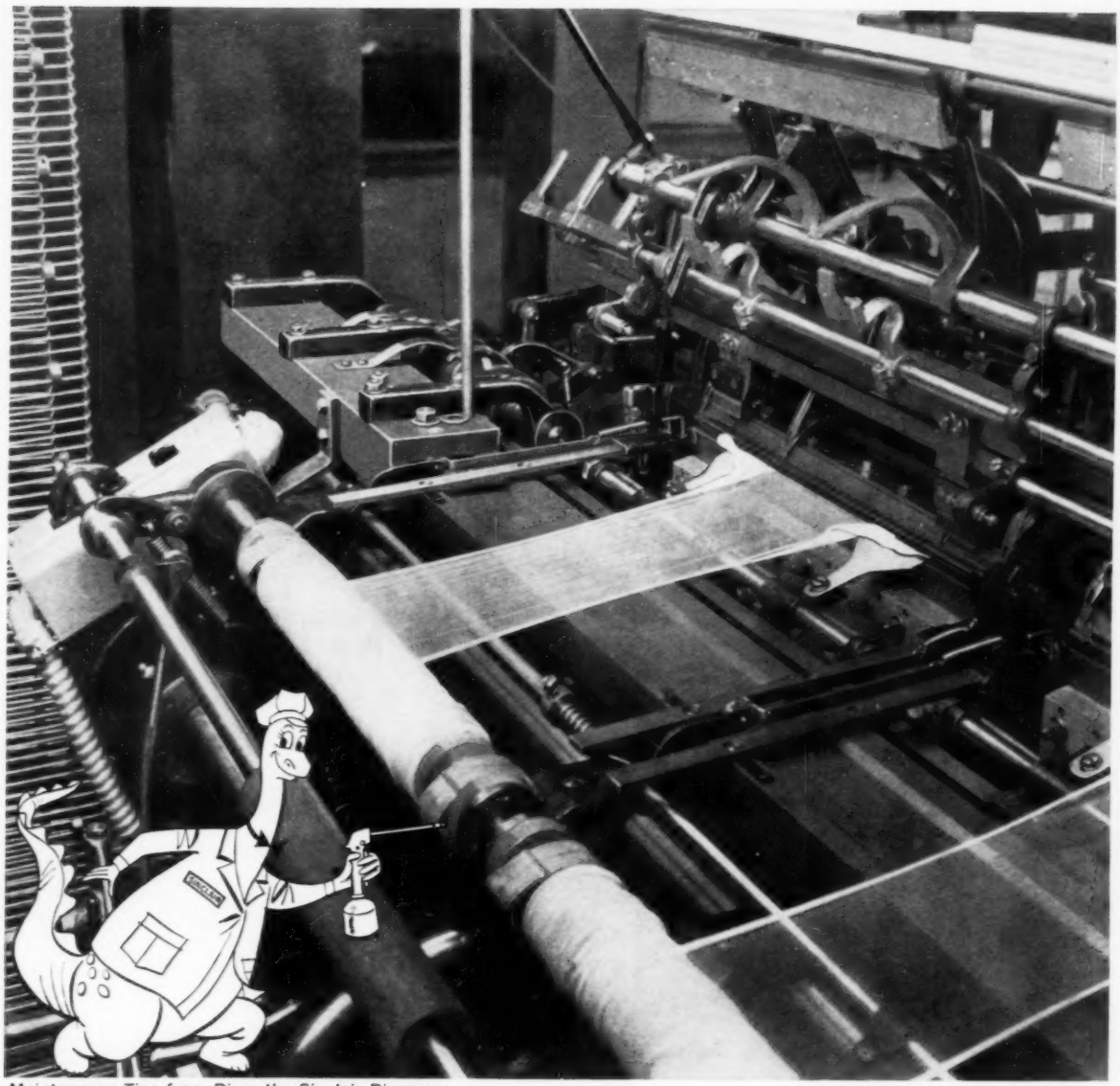
Roller lever actuator for cam or slide motion, adjustable horizontally through 360°, vertically through 225°

New switch design lets terminal screws project from top portion of the housing. Wiring is easy. Gasket and insulator are one-piece, cemented to bottom housing . . . fewer parts, no separate gasket. The new elastomer insulator-seal provides better insulation and a tighter long-life seal. New housings have thicker walls and greater strength, yet have same outside dimensions and same mounting holes as "E" and "V" switches. New hex-shaped (instead of round) conduit hub greatly facilitates tightening conduit connection. Basic switch is replaceable in all cases.
Send for Data Sheet 145.

MICRO SWITCH . . . Freeport, Illinois, A Division of Honeywell

The two-word name MICRO SWITCH is NOT a generic term. It is the name of a division of Honeywell.

Honeywell
MICRO SWITCH PRECISION SWITCHES



Maintenance Tips from Dino, the Sinclair Dinosaur

Makes Needles Tend to Their Knitting

Here's why Sinclair Crystoil keeps needles knitting. This specially-formulated needle oil keeps needles free of rust, resists encrustation, actually removes size or crust build-up.

Another advantage: Crystoil's light color makes it easier to wash stains out of knitted goods. And because Crystoil contains a special oiliness agent for greater anti-wear and anti-rust protection, needles last longer, too.

Look into *all* the advantages of Sinclair Crystoil or Crystoil Light (for finer gauge machines). Call your local Sinclair Representative or write Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

SINCLAIR
CRYSTOIL NEEDLE OILS

DYERS AND FINISHERS

save time

Thermostable Diastafor desizing agent saves you time – desizes rapidly at high temperatures up to 180°–200° F.

For fast continuous process operations, new high potency Diastafor LCD gives excellent results – saves on cost and storage space.

Standardize on Diastafor. A good prepare with Diastafor means time saved – and a finer finish.

For technical service, address: Diastafor Department.

with **DIASTAFOR®** *desizing agent*

STANDARD BRANDS INCORPORATED • 625 MADISON AVENUE • NEW YORK 22, N. Y.

News IN BRIEF

Plan Textile Production? Planning and control of production by individual manufacturers within the textile industry as a continuing matter and not just as an emergency measure is the only

answer to overproduction, says Richard R. Higgins, president of the Kendall Co. "We need to do everything we can to increase consumption. . . . But my plea is for attention to the other side of the problem—control of production, and I suggest that we don't wait for the survival of the fittest or for the millenium."

Small Business Research and Problem-Solving. Assistance of material and equipment suppliers is second only to in-plant experiments and tests in solving the small manufacturer's problems in processes and equipment, new product development, quality control and product maintenance, raw materials and finished components, and product improvement, reports Herner-Meyer & Co., Washington, D. C., as a result of a survey made for the U. S. Department of Commerce. Firms in four categories—food, textiles, electricity, and metal fabrication-light manufacturing—were surveyed. Sixty-five per cent of the firms stated that they have some conscious program for generating ideas and for solving technical problems. Firms in the "newer and more scientifically oriented industries" are more research-minded than textile firms.

NTA Seeks Buy-at-Home Rule. The Northern Textile Association has adopted a resolution calling on the Federal Government to help stimulate employment in the textile industry by procuring from American mills all textiles financed or purchased with U. S. funds. NTA cited the fact that the U. S. spent $88 million last year for the purchase of foreign textiles.

Washington Wonderland. The National Association of Manufacturers sees continued duplication of costly domestic programs and even spending at cross purposes in the 1959 budget; for example, the U.S.D.A. is planning to spend $756 million to remove land from production under the soil bank program, while at the same time the

Interior Department wants to spend $216 million to get more land into readiness for production, by building dams and irrigation systems. And the Commodity Credit Corporation intends to spend nearly two and one-half billion dollars to remove surplus farm produce from the market. Similarly, the government has budgeted $111 million for "soil conservation," and $232 million for "agricultural conservation."

Aid for Woolen and Worsted Industry. Senators Saltonstall and Kennedy of Massachusetts have introduced in the Senate a bill to aid the woolen and worsted industry by having the Department of Commerce "Initiate and support economic, applied scientific, and technical research relating to the manufacture, utilization, and marketing of woolen and worsted fabrics; and collect and foster and facilitate the dissemination and interchange of scientific and technical information relating to the manufacture, utilization, and marketing of woolen and worsted fabrics to and among all domestic manufacturers thereof." An annual budget of $1.5 million is anticipated for the operation of this legislation.

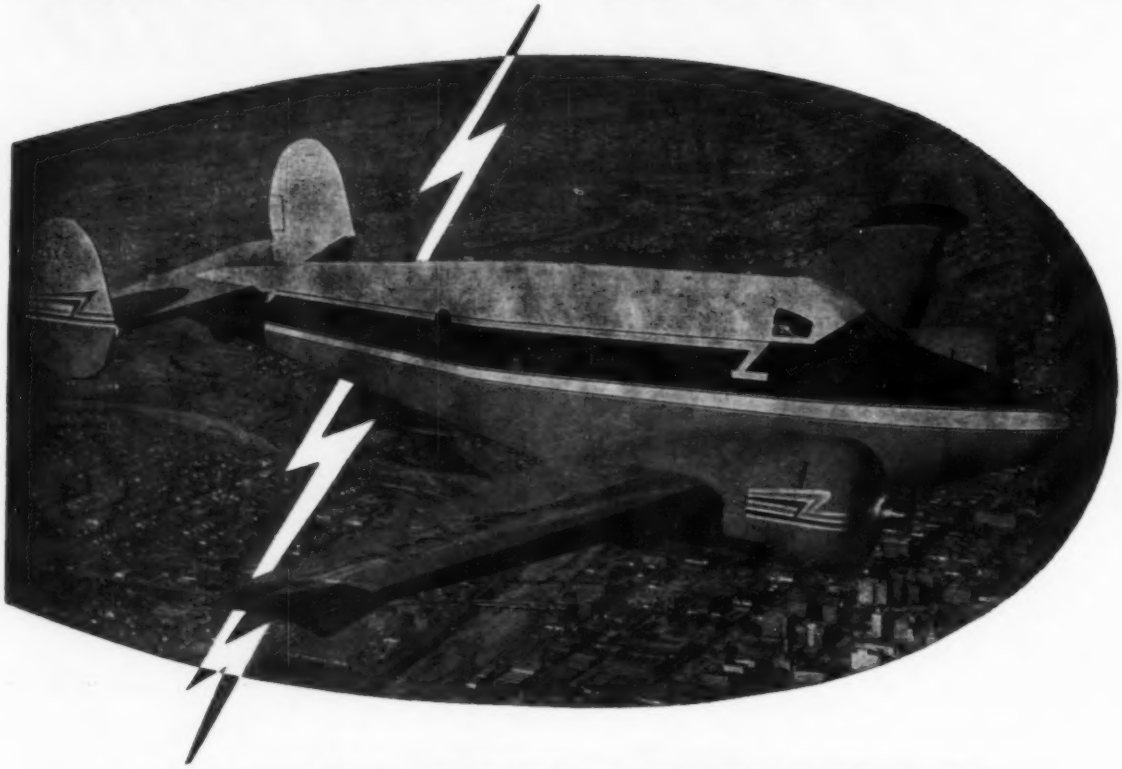
New Synthetic Fiber. The Du Pont Co. has confirmed that an experimental synthetic elastomer textile fiber, known as "Fiber K," is being evaluated in foundation garments, surgical hose, and other elastic products. It is said to have high elongation, excellent recovery, good flex life, abrasion resistance, and good tensile strength. No plans for commercial production have been announced.

Textile Outlook Good. The *Value Line Investment Survey* is bullish on the prospects for the textile industry, both for the near future and for the long pull. A recent is-

sue of the *Survey* sees a substantial upturn in sales and output for the latter part of the year, and larger sales and improved profit margins over the next few years. Expanding population and declining spindle totals are seen as

now...

Super 18 Executive Beechcraft



with WEATHER RADAR

The finest Super 18 Beechcraft in the air. Equipment includes new RCA AVQ-50 radar, Geisse safety landing gear, complete lightweight all-weather radio.

For information or demonstration call or write:

Southern Airways Company

ATLANTA, GEORGIA, TEL. POPLAR 7-3766

Charlotte, N. C., Tel. FRanklin 6-7150 Birmingham, Ala., Tel. FAirfax 2-0502

airfleet of the textile industry

favorable basic trends which will be more and more effective over the next three to five years.

Canadians Favor Imported Woolens. Canadian mills supplied only 48 per cent of the home market of about 39 million yards of wool cloth last year, compared to 68 per cent in 1950, reports the Canadian Woollen & Knit Goods Manufacturers Association. During 1957, Italian wool cloth made further inroads into the Canadian market, because of its extremely low prices.

AATCC Convention Notes. Theme of the 37th annual convention of the American Association of Textile Chemists and Colorists, to be held at the Conrad Hilton Hotel, Chicago, Oct. 30-31 and Nov. 1, will be "Assuring Advancement Through Cooperating Committees." The various tech-

nical committees of AATCC will present exhibits of their activities, taking the place of the commercial exhibits which are usually a part of the convention. There will be adequate space at the Conrad Hilton to house all those in attendance, and all activities of the convention will be held there.

Cotton Setback Coming? Cotton faces a jarring setback in its fight for markets unless changes are made in the federal farm program during the current session of Congress, says William Rhea Blake, executive vice-president of the National Cotton Council. Without such legislation, the following can be expected: Cotton acreage allotments will be cut by another 15 to 25 per cent; the short supply of better quality cotton will become even more serious; the Secretary of Agriculture will, under existing law, be forced to increase cotton support prices; and high prices of U. S. cotton will greatly encourage the expansion of foreign cotton and rayon production

Durable Goods Down, Textiles Up? The textile and apparel industries should do well in 1958, partly as a consequence of reduced popular expenditures on durable goods and availability of more

money to be spent on clothing and related items, Raymond Rodgers, professor of banking at New York University, told a recent meeting of the Financial Group of the Association of Cotton Textile Merchants of New York.

New Government Inspection Policies. Starting this summer, the Military Clothing and Textile Supply Agency will issue contracts for various clothing and textile items which will call for contractor inspection, with only enough verification inspection by MCTSA to insure continued reliability of the contractor's examinations and records. Eventually the program will be expanded to include all items procured by MCTSA.

Army Tries Paper Sandbags. Sandbags of knitted paper, replacing jute, have been developed by the Army Engineer Research and Development Laboratories at Fort Belvoir, Va., and are now undergoing extensive tests.

MIT Summer Courses. Two summer courses in the field of textiles will be given at Massachusetts Institute of Technology this summer. "Techniques in Textile Research," to be given August 18-22, will emphasize the planning

and analysis of experiments; "The Mechanics of Textile Structures," to be presented August 25-29, will deal with the mechanical properties of textile materials, starting with the behavior of individual fibers and treating fiber configurations within the finished product. For details, write Office of the Summer Session, Room 7-103, M.I.T., Cambridge 39, Mass.

News in Brief

KOMA Gift to PTI. The Pennsylvania District of the Knitted Outerwear Manufacturers Association has presented $2,000 to Philadelphia Textile Institute with no restrictions on its use.

Canadians Also Deluged By Imports—From U. S. The Canadian cotton textile industry has called for "a better balanced tariff schedule" to relieve the pressure

of imports, chiefly from the U. S. Of the Canadian consumption of 550 million yards of cotton cloth annually, nearly half is imported, and 68 per cent of the imports are from the U. S.

New Natural Fiber? An experimental herd of musk oxen is being raised on a Vermont farm to determine if its fleece or underwool, called "qiviut" by the Eskimos, can be marketed commercially, according to a recent article in *The Atlantic*. Each musk ox supplies about six pounds of fiber annually, compared to three ounces for the cashmere goat; the fiber resembles cashmere, although it is much longer. Forté Co. has found that machinery used for removing guard hairs from cashmere also works on musk ox fur.

Arcless Dielectric Heating. A U. S. patent (No. 2,821,611) issued to Julius W. Mann and George F. Russell describes arcless application of dielectric high frequency heating to textile drying. What the

(Continued on page 73)

News about

B.F.Goodrich Chemical *raw materials*

Opens new markets for non-woven fabrics

NEW COATINGS SOLVE HEAT SEALING PROBLEMS

ADVANTAGES of both appearance and utility result when non-woven fabrics can be heat sealed efficiently. The proof is in the car you drive today. Door panels are made by heat sealing non-wovens to join several materials in a single, permanent structure. The improved appearance is obvious. Not so easy to see—but equally important—are lower material costs and less expensive processing.

B.F.Goodrich Chemical engineers helped solve this problem with coatings of Geon® and Hycar® materials. Geon is frequently chosen for dielectric sealing; Hycar for hot bar sealing. However, a combination can be used to produce variations in bond, resilience, softness or hand. Coatings are applied either by spray-binding or saturation.

Here's an example of service you can get to produce better textiles for wider appeal, at lower costs. For information, write Dept. SA-2, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco In Canada: Kitchener, Ontario.

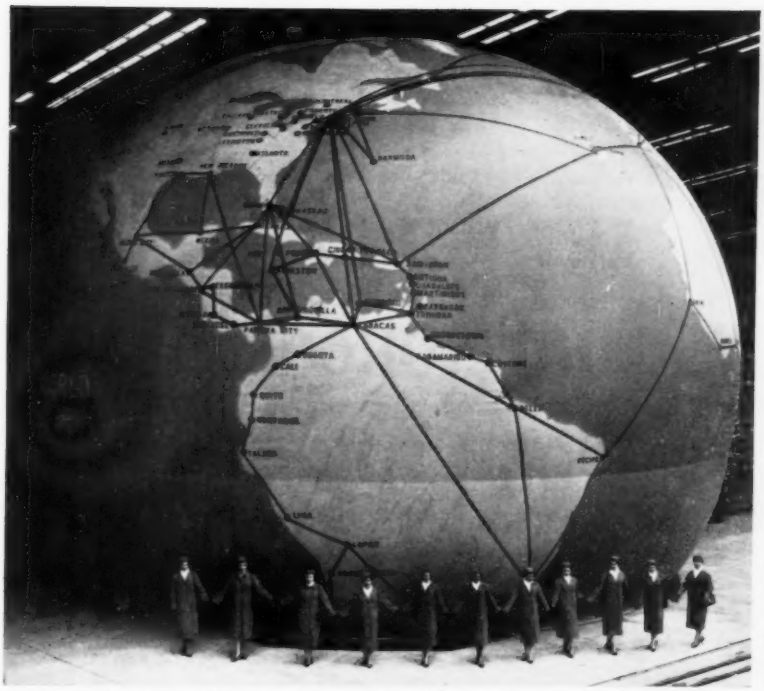
PRODUCTS FOR TEXTILE IMPROVEMENT

B.F.Goodrich Chemical Company
a division of The B.F.Goodrich Company

B.F.Goodrich

GEON polyvinyl materials • HYCAR American rubber and latex
GOOD-RITE chemicals and plasticizers • HARMON colors

News in Brief



Air-filled globe on exhibition at the Brussels World's Fair shows routes of Pan American World Airways. It is made of Fiberthin, vinyl-coated nylon fabric. The structure is 52 ft in diameter and 42 ft high, and will comfortably seat more than 150 persons for its use as a planetarium at the international exhibit. Deflated, the structure can be packed in an 8' x 6' x 6' box. The globe was made by Irving Air Chute Co., using about 1000 yd of fabric.

New textile center at 111 West 40th St. is the New York home of Greenwood Mills, Pepperell Mfg. Co., Indian Head Mills, Wellington Sears Co., Iselin-Jefferson Co., and other textile firms and selling houses.

Cross sections of regular nylon tire (left) and Goodyear's new Super-Cushion tire (right) show how tension-free shaping process profits a tire for the road. New tire is filled with air when removed from curing mold, and held in normal running inflated shape until cool. The process relieves pull and stretch on tire's cord, body, and tread, preshaping it for use. The regular tire shrinks while it is cooling, and so stretches in use.

← Hand-woven panels—22 of them, each 9 yards long and 54 inches wide—by Dorothy Liebes form the on-stage curtain of the "Theater for the Performing Arts" at the American Pavilion of the Brussels Fair. The panels required 140 pounds of Lurex metallic yarn.

ELIMINATE TOP WAXING OF NYLON WARPS... SIZE AND LUBRICATE IN ONE OPERATION...

LET NOPCOSIZE® N AND NOPCOLUBE® 55 WORK FOR YOU

Nopcosize N, a polyacrylic acid size, is internally plasticized to give a pliable yarn during the weaving of filament nylon. Nopcolube 55, an emulsifiable lubricant, is added to the size mix to eliminate afterwaxing at the delivery end of the slasher.

Developed by Nopco chemists, these two products give increased quality, greater economy, and cleaner goods. In fact, the combination of the two in the size pan is acknowledged to be today's most successful technique for sizing producer's twist nylon.

We would be happy to supply enough of both for you to make your own trial run. Just call or write our Textile Chemical Department.

NOPCO

VITAL INGREDIENTS FOR VITAL INDUSTRIES

NOPCO CHEMICAL COMPANY
Harrison, N.J.

PLANTS: Harrison, N.J. • Cedartown, Ga. • Richmond, Calif. • London, Canada

The pluses of NOPCOSIZE N plus NOPCOLUBE 55

- *Exceptionally flexible, well-lubricated warp*
- *Superior split at higher slashing speeds*
- *No need for top waxing*
- *An absolute minimum of seconds*

inventors call a "heat retention type electrode" is composed of multiple metallic elements separated by thin layers of high loss dielectric, which retains some heat and permits operation of warm rather than cold electrode units. This prevents recondensation on the electrodes and so eliminates RF flash-back. The patents will be licensed nonexclusively to users and manufacturers by Mann-Russell Electronics, Tacoma, Wash.

New Wool Futures Report. Commodity Exchange Authority is now issuing a monthly report showing the amount of speculative and hedging positions of traders in wool and wool top futures as given by the Wool Associates of the New York Cotton Exchange. Interested persons may be placed on the mailing list to receive the reports by addressing the CEA, U. S. Department of Agriculture, Washington 25, D. C.

News in Brief

Machinery Show Dates Set. American Textile Machinery Association has announced that the next machinery show to be held under its auspices will be at Atlantic City, N. J., May 23-27, 1960. Almost twice as much space will

MERCHANDISING NOTES

American Viscose Corp. has launched a broad program of merchandising and advertising to promote its "Cotron" fabrics—fabrics woven or knitted of blends of Avisco rayon and cotton.

Callaway Mills have expanded their line of nonwoven wool interlinings, formerly available only in a neutral color, to include light tones and black.

Chemstrand Corp's film, "Fibers and Civilization," is a part of the U. S. program at the Brussels World's Fair to acquaint visitors with "How America Lives."

Du Pont Co. reports that its 18-minute color film, "Just a Hint of a Tint," prepared in behalf of colored hosiery, has been viewed by more than 12,000 retail and manufacturing personnel. * * * In an 8,000,000-mile test made for Du Pont by a Baltimore taxi company, 78 rayon tube-type tires and 78 tubeless nylon tires were placed on cabs—two of each on each cab. The nylon tires averaged 61,040 original and recap miles, against 44,834 for the rayon. Of rayon cord tire failures, 72 per cent were attributable to casing or carcass breaks; such fiber failure represented 21 per cent of nylon tires which failed. Costs were said to be 8 per cent lower for nylon tires—a saving of $15 per year per cab if all nylon tires had been used. * * * Du Pont presented its first fashion show devoted entirely to children's wear of Orlon, Dacron, and nylon recently.

J. P. Stevens & Co. flew 55 buyers from some of the nation's top retail firms to Dublin, Ga., recently for a one-day look at its new Nathaniel Plant.

Patentex, Inc., has acquired the exclusive license to the Danskin patent for the manufacture of full-fashioned, stretch-nylon leotard tights. The method covered by the patent permits production of the tights on existing full-fashioned hosiery equipment. Patentex will in turn license the patent to the knitting trade.

National Cotton Council reports that the cotton industry will have to sell 19.9 billion yards of fabrics in this country and overseas—enough to reach to the moon and

back 22 times—in 1958 if it is going to attain its anticipated consumption and hold its customers.

Federal Trade Commission has issued a complaint against a major hosiery manufacturer for fictitious pricing, contending that the amount of hosiery sold at the $1.95 label on the stockings was too small to establish a customary retail price, and that a "half-price" sale was therefore deceptive. FTC also alleges that the use of the names of famous designers as brand names on the hosiery was deceptive, since it would lead the customer to believe that the hosiery was "created, designed or fashioned" by these designers. Commenting, the National Association of Hosiery Manufacturers says that an eventual ruling by the Commission will be fortunate, since the hosiery field has for too long been lacking in the definite guideposts to which it is entitled.

Geigy Dyestuffs is offering an educational kit entitled "Prevention of Moth Damage" without charge to home economists and teachers. They are also offered the loan of a documentary film "Insects Astray." If interested, write the editors of TEXTILE INDUSTRIES for details.

C. H. Masland & Sons is now treating all its wool yarns with the "Hex-A-Moth" process, which it developed in conjunction with Shell Chemical Corp.

Princeton Knitting Mills are producing two new fabrics for women's coats, knitted of Verel modified acrylic fiber, under the name "Temptation." Princeton emphasizes that the fabrics are not imitation fur, but original fabric developments.

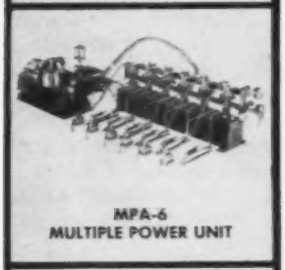
Stedman Manufacturing Co. has introduced a tight, tapered, and form-fitting T-shirt, called the "Torso T" in the version for men, and the "Silhouette T" in a women's version.

Wellington Sears Co. reports that it has licked the problem of wicking in nonwoven shoe fabrics by treating its Lantuck fabric to make it compatible with water-base latex and solvent-base cement.

DO YOU HAVE THESE CLOTH GUIDING PROBLEMS?

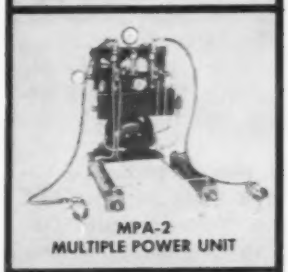
HLBG
POWER UNIT

FIFE
CAMBERING ROLLER ASSEMBLY

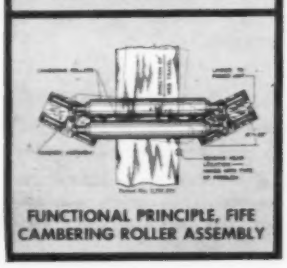


MPA-6
MULTIPLE POWER UNIT

KHWA
SHIFTABLE CRADLE



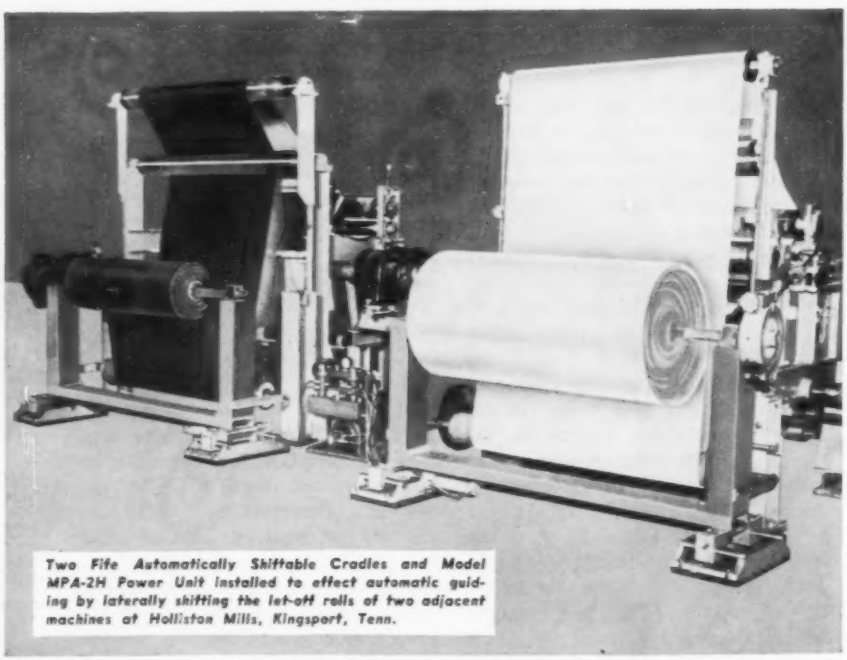
MPA-2
MULTIPLE POWER UNIT



FUNCTIONAL PRINCIPLE, FIFE
CAMBERING ROLLER ASSEMBLY

1. Would you like to have your cloth selvages engaged more evenly and accurately on your tenter pins or clips, automatically positioning your tenter rails with smooth, accurate hydraulic action?
2. Would it give your company a sales advantage to automatically have accurately wound rolls of goods to offer your customers?
3. Would your cloth room inspectors be able to do a more efficient job of inspection if they did not have to spend time manually shifting goods into alignment?
4. Would more accuracy in positioning your cloth goods into coating, combining, drying, laminating or any finishing plant operation help you reduce waste?
5. Would you like to guide into printing with sufficient accuracy to be able to print a legend on the selvage edge?
6. Would you be interested in having your materials guided into trimming or slitting with sufficient accuracy to eliminate all waste other than the selvage edge?

FIFE HAS THE ANSWERS to these as well as many other guiding problems encountered in the textile field. One or another combination of the various components which we manufacture can offer the solution to almost any automatic guiding problem.



Two Fife Automatically Shiftable Cradles and Model MPA-2H Power Unit installed to effect automatic guiding by laterally shifting the let-off rolls of two adjacent machines at Holliston Mills, Kingsport, Tenn.

For complete 27 page catalogue, write to:

• FIFE • MANUFACTURING Company
INCORPORATED
FORMERLY
AUTOMATIC WEB CONTROL MFG. COMPANY

P. O. Box 878 Oklahoma City, Oklahoma

be available as for the last show, held in 1954.

NAWM Awards. National Association of Wool Manufacturers this year presented its annual Golden Fleece awards for achievement in their chosen fields and for good dress to Bert Bacharach, New York fashion columnist and commentator; John D. Gray, president of Wallachs, Inc., New York clothing store chain; Jan Mitchell, owner of Luchow's, New York restaurant; and Frederic W. Tipper, partner in the New York sales agency for Cascade Woolen Mill.

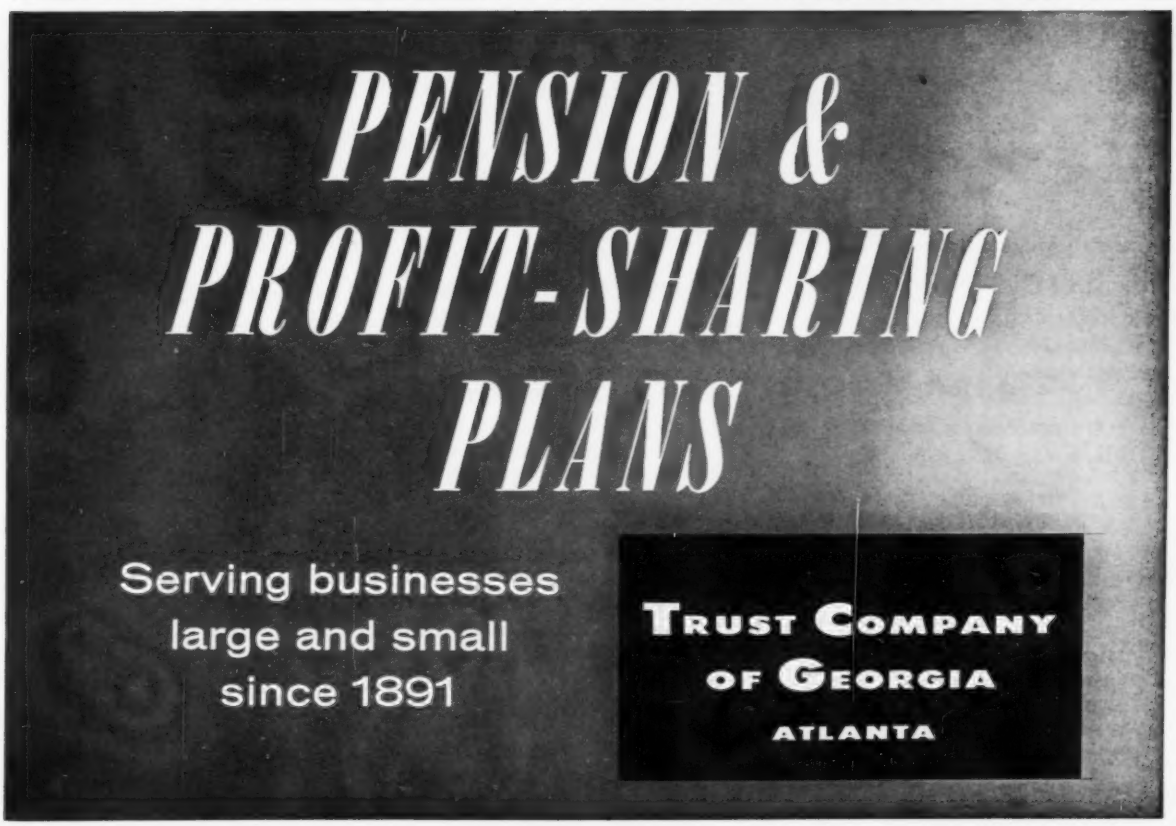
Swedish Textiles Tour U. S. "Swedish Textiles Today," an exhibition assembled by the Swedish Society for Industrial Design and emphasizing Swedish decorative fabrics, will make a tour of the United States lasting more than a year. It opens in Manchester, N. H., on July 7, will be seen in New York starting September 25, and will tour the South next year.

NBIT Expansion Plans. New Bedford Institute of Technology has announced plans for improvement of its physical plant which calls for expenditure of $5,710,000 over a ten-year period. Major parts of the program include a new research and graduate school, student union building, arts and science building, library, and administration building.

Job for Trade Associations. "We believe it would be valuable information for the statistical section of our trade associations to conduct a survey of gauge and age of spinning spindles in place, in order that shrinkage of spindles could more accurately have a bearing on supply equations. For instance, if every antiquated 2¾" and 3" gauge spindle in America were replaced with modern 4" gauge, we probably could produce the needs of the American market with considerably less spindles than now in place. Our personal opinion is that we have a greater production potential of a given yarn count today than we had a few years ago"—*George H. Hightower, retiring president of the Cotton Manufacturers Association of Georgia, at recent annual meeting.*

Textile Buying Campaign. In line with President Eisenhower's "Buy Now" drive, The Textile Section of the New York Board of Trade launched on May 21 a campaign to accelerate the public's buying of textiles.

Mills May Use High-Bulk Yarn Patent. The Du Pont Co. has announced that U. S. Patent No. 2810281, relating to the manufacture of high-bulk yarns through the use of mixed shrinkage fibers, issued to Delaware Mills, Inc., has been assigned to Du Pont. The company stated that the patent will be dedicated to the public so that textile manufacturers who desire to operate under it may do so without fee or license.



FINISHING PROBLEMS VANISH

when you use Procter & Gamble's famous softeners and lubricants!

It's almost like magic the way the Profines help eliminate finishing problems, help turn out fabrics that look, feel, sew and sell better! And that's why so many top-flight finishing plants have switched to the Profines. How about *your* plant? Are your threads, yarns and fabrics getting the advanced benefits of Profine-finishing? If not, it's time to try one or more of the Profines.

Profine

...Paste
...Special Paste
...Flakes

TODAY'S MOST ADVANCED FINISHING AGENTS

for Threads, Yarns, Fabrics!

Provide All These Advantages...

- Tremendous anti-static and lubrication properties.
- Full effectiveness at extremely low temperatures.
- Complete ease in making and using permanent solutions.
- Outstanding scorch resistance . . . elimination of discoloration, yellowness, odor development.

Assure Finest Finishes for All Fabrics!

The Profines work to perfection on all types of threads, yarns and fabrics, man-made or natural! A fabric finished with Profine has all the properties you want it to have—full-bodied smoothness, anti-static action, lubricity. And, equally important, the Profines are always uniform in quality . . . always dependable. When you use a Profine, you can count on every yard of thread, yarn or cloth having the same finish, the same hand!

The Procter & Gamble Textile Representative in your area will be glad to give you all the facts about Profine. Or, if you prefer, write to: Procter & Gamble, Textile Finishes Sales Department, Cincinnati 1, Ohio.

Profine

Developed and made by Procter & Gamble . . . Recommended by outstanding fiber manufacturers . . . Used by leading finishing plants . . .

FOR SMOOTHER TEXTILE PROCESSING, USE P & G'S OLATE, PROXOL, ORVUS AND KYRO PRODUCTS

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

A gout is a slub is a slug

WE ALL want quality. We all want to eliminate defects. We all want standardization (in the technical sense). Then let's discuss the matter of standardizing the names we use in the mill to designate defects which affect quality.

Over the years we have kept a "Textile Defects Dictionary." This now lists a couple of hundred yarn and fabric defects, from "asphalt stains" to "yellowing." However, many of these are duplicates. There is perhaps an average of four names for each defect.

The American Society for Testing Materials lists and defines 27 defects occurring in woven fabrics; the "Modern Textile Dictionary" lists 20; "The 'Mercury' Dictionary of Textile Terms" lists 15, most of which do not duplicate the names used in the other two lists although the meaning is often apparently the same; and so on.

In the mill, we must know what defects occur most frequently, so that we can set out to eliminate them. But first we must be sure that the superintendent, the overseers, the inspectors, the quality control men, and the others who enter into the act are speaking the same language. Is it a hitch-back? A start-up mark? A sticker? Or are they the same thing?

During many years in textile mills, both North and South, we have seen a single defect called by many names—and we have also seen distinct defects lumped under one name, usually because it was easier. But if we are going to trace these defects, the name we call them can be important.

A case in point: We recently read an article about "gouts." We weren't familiar with this term except as the name for an infirmity which afflicted intemperate members of the British upper classes, but now we've added "gouts" to our dictionary as a synonym for "slubs," "bunches," "slugs," and "snakebellies."

THESE TERMS indicate "bunches" in the yarn, but they always turned up in our "Code for Seconds" as "warp slubs" and "filling slubs." From an interdepartmental relations viewpoint, we believe the word "slubs" should be deleted from the Code and the word "bunches" substituted instead. We have good reasons for that, because when the fault is merely listed as "slubs" it indicates at first glance that this defect had slubbed through the drafting rolls undrafted, or at best partially drafted.

It is quite easy for the spinning room overseer to say that he is getting roving peppered with slubs—and the card room overseer in turn accuses the spinning department of making slubs. We have seen them agree that "bunches," both clean and dirty, are faults of both departments, but when it came to "slubs" we have witnessed many a verbal argument as to blame.

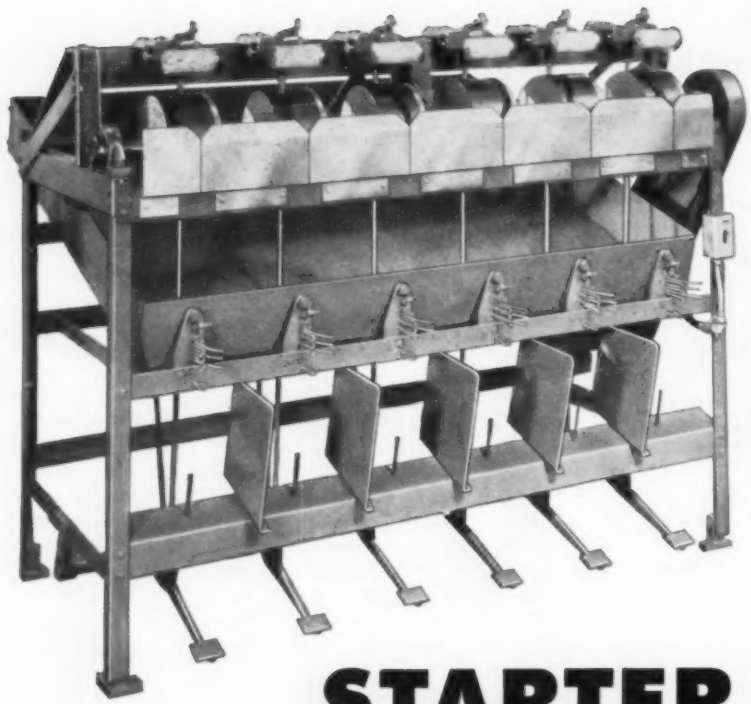
But "slubs" in the Second Sheet covered a multitude of sins, and there was no way of knowing if they were the slubbed-through variety or just dirty cleanings or flying lint, etc., that got into the yarn. Of course, when these defects were viewed in the cloth, the greater percentage of them were pinpointed, that is, at grey cloth inspection. But, after finishing, they were categorically classified in the Second Sheet as "slubs"—period.

Writing from observations and many years experience we know that the law of "self-preservation" is just as fundamental in the mill as it is outside. And so is human nature. Therefore, when the weekly Second Sheet was reviewed in the manufacturing division, there was more than one tongue-in-cheek reservation as to the origin of all the seconds charged to the manufacturing division. The percentages of seconds listed were compiled from figures submitted by the finishing division after *their* inspection of the finished cloth.

In a corduroy mill that processed from bale to finished cloth it was quite easy (sometimes unknowingly) to charge all small or large holes in the cloth to slubs removed from the cloth by the grey cloth inspection burlers. We have seen holes made by faulty knives and guidesetters made in the finishing division, that have all the appearance of similar holes made by the removal of slubs, sometimes negligently removed.

However, the grey cloth room kept its own records of seconds in the grey, and comparisons were made with specific piece numbers whenever a high defect incidence was noted.

(Continued on page 79)



BARBER COLMAN

STARTER MAKER

DESIGNED TO MEET THE NEEDS OF MANY MODERN MILLS

This machine is arranged to wind starter layers of yarn onto a core, from a *cheese* as the supply package. The use of a cheese rather than a bobbin *speeds up* the operation in that *many* "starters" can be made from one supply package; in contrast with the previous method where one bobbin supplied only one, or a limited number, of "starters." Tension fingers positioned above the package allow the proper amount of tension to be introduced.

TAIL FOR MAGAZINING

An additional advantage is that this machine can be used to make a tail of yarn on the "starter," to be used in magazining cheeses. This tail consists of several initial wraps of yarn which are separate and to one side of the main body of the "starter," and subsequently the full cheese. This allows for easy finding of the end, and permits magazining without difficulty. Furthermore, each package will then be stripped completely of yarn, doing away with the necessity of backwinding pieces.

WINDS WOOD CORES

The picture shows wood cores being wound on live spindles, these cores being the kind generally used on twisters, doublers, backwinders, and the like. Adaptors are available for the spindles so that bakelite or dye sleeves can also be wound as "starters" on this machine. The use of a Starter Maker is extremely advantageous for mills dyeing on cheeses, where fresh "starters" are needed every time.

EASILY CONTROLLED, VERSATILE

The operator simply picks up the end from the package, lays it into the tension device, gives it a few wraps around the core, then lets the core down onto the winding drum. When enough yarn is wound on to the core, stepping on the foot pedal lifts the "starter" from the drum and applies a brake. When the end is broken off, part remains held in the tension device, ready for first wraps on the next core. *For complete information, see your Barber-Colman representative, or write direct to the factory.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U.S.A. MANCHESTER, ENGLAND MUNICH, GERMANY

INDIA	MEXICO	BRAZIL	JAPAN	PAKISTAN	PAKISTAN
Batliboi & Company Forbes Street, Fort Bombay, India	J. Rabasa Isabel la Catolica 45-913 Apartado 7348 Mexico D.F., Mexico	Industria e Comercio de Maquinas S. A. Avenida Rio Branco No. 50, Rooms 1201/3 P. O. Box No. 63 Rio-de Janeiro, Brazil	Do-Yei Shoji Kabushiki Kaisha Atlas Building (7th Floor) 11, Bingo-machi, 3-chome, Higashi-ku, Osaka, Japan	Associated Agencies (M'cr.) Ltd. Piccadilly House 11 Piccadilly Manchester 1, England	Associated Agencies (M'cr.) Ltd. 27 Kothari Building Napier Road Karachi 2, Pakistan

(Continued from page 77)

BUT to get back to the naming of the defects, and the defects themselves. We have always thought of the terms "slubs," "slugs," and "snakebellies" as meaning practically the same thing —with "snakebelly" slubs being of the longer variety, slubbing through the rolls and winding on the bobbin when conditions were ideal—less tensions. We have seen them, and the shorter slubs, fall down by their own weight as they emerged from the front rolls, but unfortunately many wind onto the bobbin.

At one time we used a "flat-top" traveler of low gravity to "trap" slubs, but it was obvious that the sources had to be eliminated to bring the quality up to the degree of excellence we desired. We still believe they should be classified as "bunches," thus a quality drive (always at a high level) would encompass all phases in this defect cleanup.

Slubs that slub through the rolls are almost invariably clean. This gives rise to the thought that they are machine-made, or something else. The "something else" we infer involves poor work methods and callous indifference—until corrected. However, we don't wish any misunderstanding — not all slubs are clean—but those that are *made* by poor work methods, by the individual operator, in the main are clean.

Many of the poor work methods we spotted were quite by accident, which enhances the value of observation—close observation. We happened to be near a converted slubber one evening when we noticed the tender piecing up an end from the can in back of the machine. That by itself is not unusual but when we saw him wet his fingers with his tongue and "hard twist" the broken end and saw "slubs beget slubs" as they came through the rolls, we knew we had spotted a bad working method. This particular bad piecing was only slightly affected by total draft and broke up into four distinct slubs and passed on to the bobbin.

What happens in the spinning? Slubs again beget slubs (we have tested them), and though many break down, too many get through to the cloth. A piecing doesn't necessarily have to be "wet hard twisted" alone to cause this defect —dry hard piecings at the second intermediate roving frames and at roving changes in the spinning, will also cause this defect. Whatever the names given to them, a knowledge of the sources is more important. Still more important is proper work methods.

We mentioned the words "callous indifference," and we meant in relation to operators who deliberately allow bad work to be made, and do nothing about it. Perhaps we also should mention that top supervision has to be "on top" all the time. However, the bad operators we came across were few and far between, but these operators were responsible for a tremendous amount of poor work. We have noted spinners watch slubs go into the yarn and do nothing about breaking down the end and removing them. A yarn pieceup is preferable to slubs in the yarn.

Again, we have observed a spoon tied down in back of a finisher draw frame, preventing a knock-off when the end ran out. The tender would start in another end when she made her rounds. How many spoons were tied down, we didn't check. We simply stopped the frame and called the second hand. The idea behind it was to keep the hank clock running because the tender was getting paid by the hank.

HOWEVER, we were discussing names, and many of them are quite intriguing and challenging. Do you know offhand what "chafed" yarn is? "Bruised" yarn? "Pinched" yarn? To us these names mean the same thing, and I suppose we could list them all under "damaged" yarn, but these names were applied specifically to one defect.

Our experience has been that this defect is more prominent in rayons and blends than in woolens and cottons. It is a defect usually charged to the burler who, when removing another defect, damages the surrounding yarn with her burling tool. Once damaged, the yarn goes offset in the dye, or off-shade.

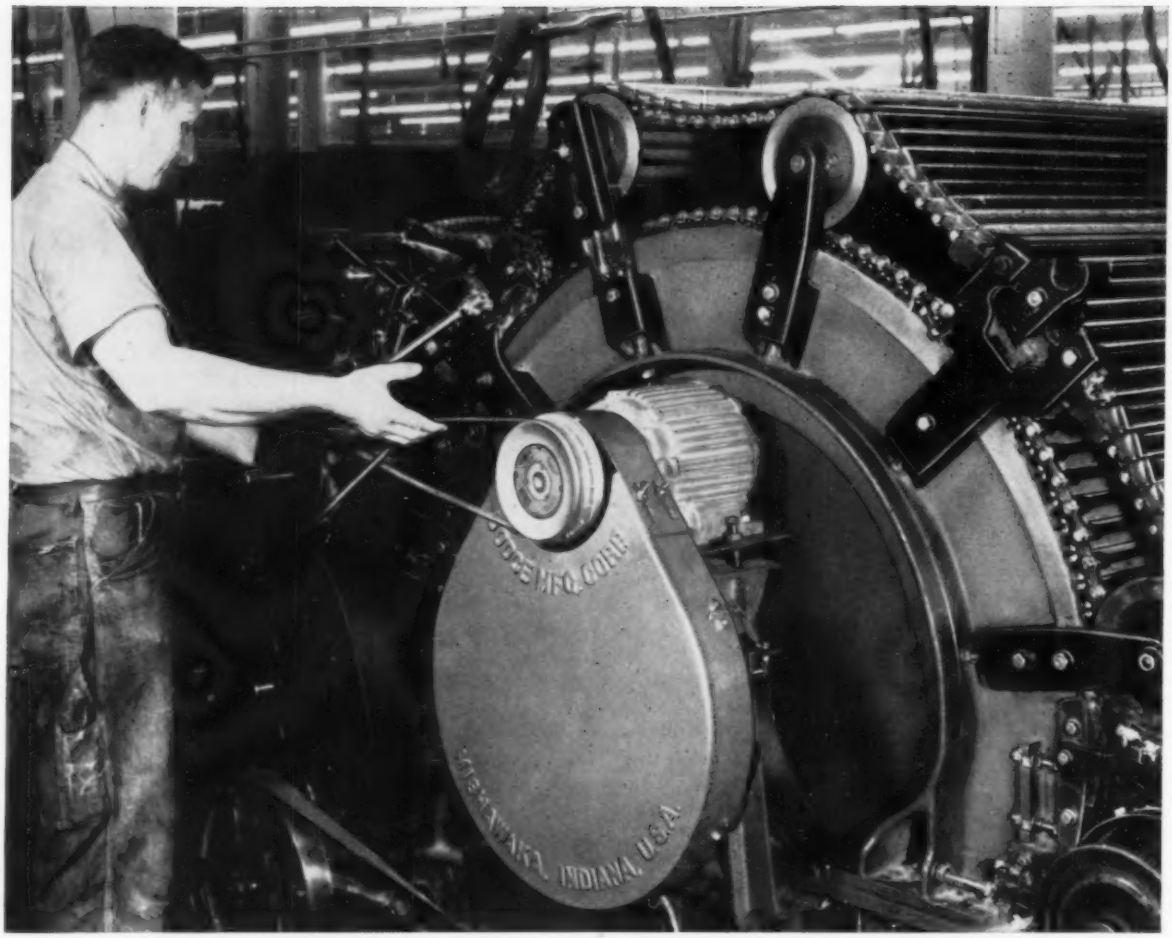
But before we fully understood all these names (though we suspected what they meant), we in the plant called it bruised yarn, our New York office called it chafed yarn, and the dye house employees who displayed finished pieces for our inspection called it pinched yarn. And there you have it—three different names for one defect in practically the same area.

Who coined these words, we haven't the least idea. Though we personally believe this defect was originally called just plain "damaged" yarn, here again we can't prove it. But we Americans have a propensity for coining words, short and to the point, if possible —unlike the British who, for example, will use groups of words to describe something—like anti-balloon plate, which we simply call a separator.

Now, conversely, a multitude of defects can be, and are, listed under one name. We refer specifically to defects charged to "uneven yarn," for it is obviously impossible to list all the defects charged to uneven yarn on the Second Sheet. We can name between ten and twenty—maybe more—sources of uneven yarn in the spinning room alone, and perhaps it's expedient to list all these defects under one name.

But do we record all known defects and names? We list a few sources without detail: plugged aprons, cut or nicked top rolls, back steel roll laps, damaged flutes on steel rolls, bad spindle, bad bolster, slack tapes, choked arbor ends of top rolls, dry rolls and eccentric bottom roll sections. These can all cause the yarn in the cloth to be and appear uneven.

However, in summing up, we'd like to make the following recommendations if quality is to be our goal to the "highest degree of excellence." First, we recommend that the overseers of all departments get together with their second hands and list all known



INDIVIDUAL CARD DRIVE GIVES SOFT STARTS

...ACCELERATES QUICKLY TO FULL SPEED

...AVOIDS EXCESSIVE STRAIN

Flexidyne, heart of this new complete Card Drive by Dodge, picks up the load smoothly... protects machinery and motor against shock and overload . . . delivers 100% efficiency during running cycle. Flexidyne, *the Dry Fluid Drive,* eliminates need for high torque motors and expensive controls, saves power, provides a new and better way to drive textile machines.

Note the special aluminum pulley mounted on Flexidyne housing, enabling quick, convenient operation of stripper. Pedestal has adjustable motor base to control tension on V-belts. You should have the full story of all the advantages of the new Dodge Flexidyne Card Drive. Ask your local Dodge Distributor, or write us, for new illustrated Bulletin A-653.

DODGE MANUFACTURING CORPORATION
3500 Union Street, Mishawaka, Indiana

NEW! FLEXIDYNE CARD DRIVE

A complete package, ready to install.

- Flexidyne, keyed to motor shaft
- Pedestal, supporting motor
- V-flat drive
- Aluminum stripper pulley
- Aluminum guard

DODGE
of Mishawaka, Ind.

CALL THE TRANSMISSIONEER—your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look in the *white* pages of your telephone directory for "Dodge Transmissioneer."

defect sources, causes, and their names. These lists should be centrally posted or made easily available otherwise to all supervisors. As new defects, sources, and causes are turned up, these can be added to established lists. We definitely cannot trust everything to memory—and many a guess as to defect source and cause at cloth inspection periods, could immediately become fact-finding by pinpointing the probable or specific defects in such lists.

Second, all supervisors would know what other departments have encountered in the way of defects, and if any of these defects had their origin in *their* departments.

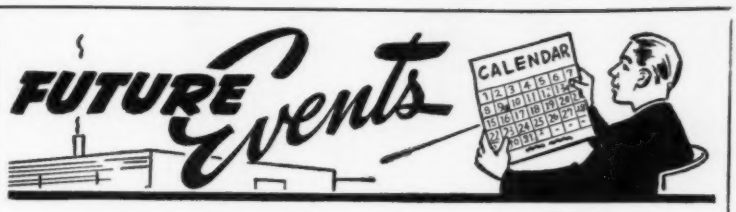
Third, the defect lists should never be used as "weapons" to touch off a quality drive. Scaring the employees into greater efforts for higher quality can boomerang. Most of them are just as interested as supervisory-management in properly maintaining their machines, and using only the best work methods in their work performances.

UNUSUAL defect names always held a strange fascination for us, but sometimes a few weren't given suitable attention and on occasion we've been caught in a situation where we didn't have much knowledge of the name of the defect or the defect itself—and for this we have no excuses.

One such name and defect—"rowey cloth"—always appeared on our Second Sheet, but the defect percentage charged to it was almost invariably less than one-half of one per cent. Perhaps this factor alone was why we didn't pay much attention to it. Besides, we held at that time a suspicion that it was somehow connected with "uneven weave."

However, when piece number after piece number began to appear on the Second Sheet and all charged to "rowey cloth" as the top defect, it seemed suddenly that everyone wanted to know

(Continued on page 239)



Date	Event	Location
June 5-7	Tufted Textile Manufacturers Association annual meeting	Daytona Plaza Hotel Daytona Beach, Fla.
6	Metropolitan Section AATCC annual outing	North Jersey Country Club Wayne Township, N. J.
6-7	Southeastern Section AATCC annual outing	Radium Springs Ga.
6-8	Piedmont Section AATCC annual outing	Grove Park Inn Asheville, N. C.
13	Rhode Island Section AATCC annual outing	Wannamoisett Country Club, Rumford, R. I.
13	Western New England Section AATCC outing	Wallingford, Conn.
13-14	Mid-West Section AATCC annual outing	Brown's Lake Resort Burlington, Wis.
19-21	Southern Textile Association annual convention	Grove Park Inn Asheville, N. C.
20	Hudson-Mohawk Section AATCC annual outing	Antler's Country Club Ft. Johnson, N. Y.
27	Niagara Frontier Section AATCC annual outing	
Sept. 9-10	The Fiber Society	Montreal, Que.
11-12	Combed Yarn Spinners Association annual meet	The Cloister Sea Island, Ga.
12	Delaware Valley Section AATCC	Wilmington, Del.
12	Northern New England Section AATCC outing	Wachusett Country Club West Boylston, Mass.
13	South Central Section AATCC	Hotel Patten Chattanooga, Tenn.
25-26	Northern Textile Association	Wentworth-by-the-Sea Portsmouth, N. H.
25-26	Textile Quality Control Association	Grove Park Inn Asheville, N. C.
Oct. 1-2	Chemical Finishing Conference	Washington, D. C.
6-10	Southern Textile Exposition	Greenville, S. C.
9-10	North Carolina Textile Manufacturers Association annual meeting	Carolina Hotel Pinehurst, N. C.
10	Southern Textile Overseers Association	Greenville, S. C.
11	Textile Operating Executives of Georgia slashing and weaving discussion; 9:00 A.M.	Georgia Tech Atlanta, Ga.
13-16	National Industrial Packaging, Handling, and Shipping Show	The Coliseum Chicago, Ill.
14-17	A.S.T.M. Committee D-13 fall meeting	Sheraton-McAlpin Hotel New York, N. Y.
15-25	International Textile Machinery Exhibition	Belle Vue Manchester, England
23-24	Southern Textile Methods & Standards Association	Clemson House Clemson, S. C.
25	Alabama Textile Operating Executives carding and spinning discussion, 9:30 A.M.	Thach Auditorium Auburn, Ala.
Oct. 30-Nov. 1	AATCC National Convention	Hotel Conrad Hilton Chicago, Ill.
Nov. 7-8	Textile Seminar sponsored by University of Georgia division of clothing and textiles in extension, teaching, and research	Georgia Center for Continuing Education Athens, Ga.
17-19	Narrow Fabrics Institute annual meeting	Hotel Roosevelt New York City

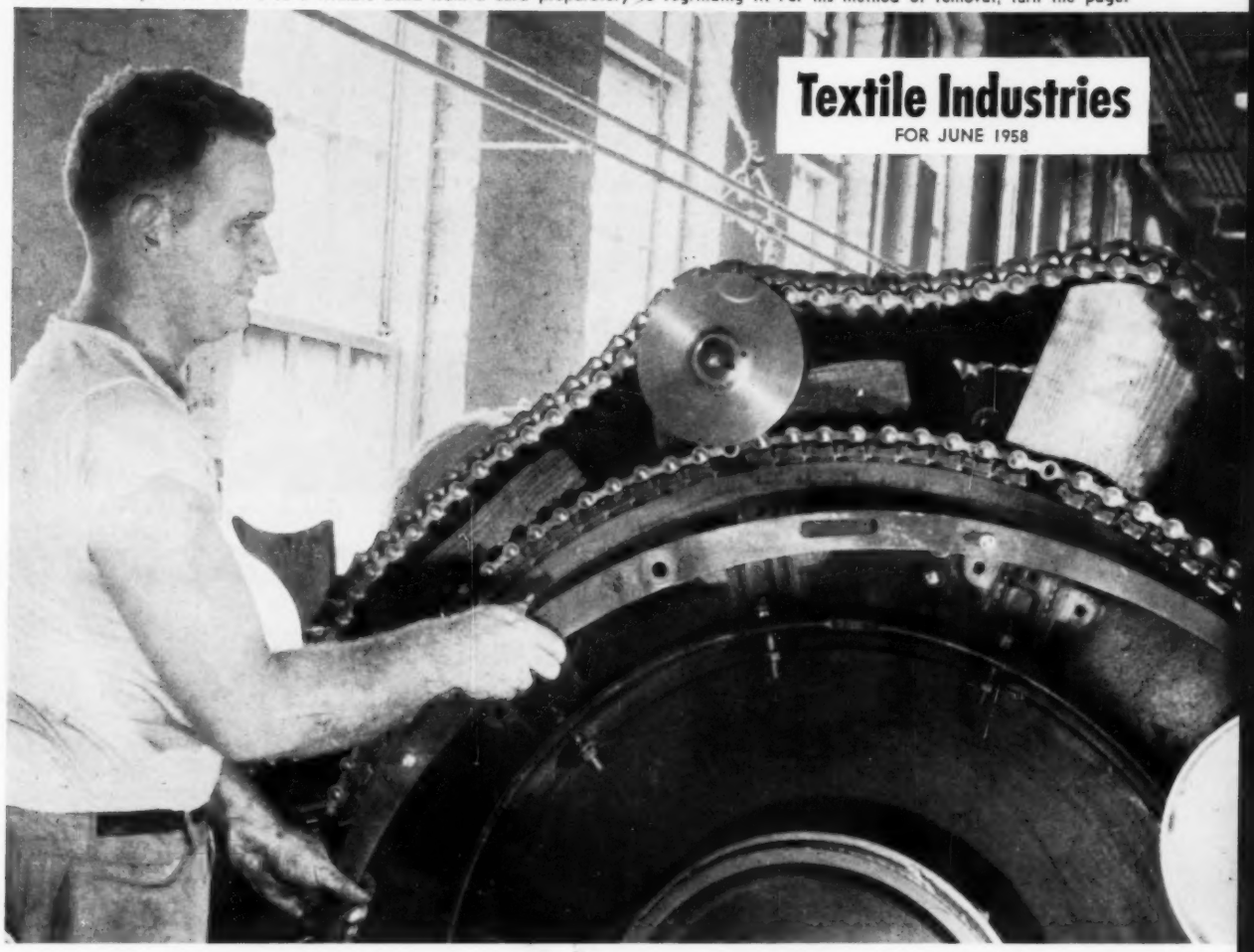
SHE'D NEVER BOIL A COLORAY® FABRIC ...BUT SHE COULD!

Courtaulds did it! Courtaulds boiled bright red Coloray fabric together with white fabric. And the color didn't bleed, streak or stain. That's colorfastness!

"COURTAULDS"
COLORAY®
Solution-dyed rayon fiber with captive color...can't escape!

For further information, write:
COURTAULDS (ALABAMA) INC.,
first name in man-made fibers, first name in solution-dyeing.
600 Fifth Avenue, New York 20 • Greensboro, N. C. • Le Moyne Plant, Mobile, Ala.

Section man Clyde Smith removes a flexible bend from a card preparatory to regrinding it. For his method of removal, turn the page.



Textile Industries
FOR JUNE 1958

They conquered the bends!

With quality demanding the most from the cards at Canton Cotton Mills, the flexible bends were resurfaced and rendered more sensitive to adjustments

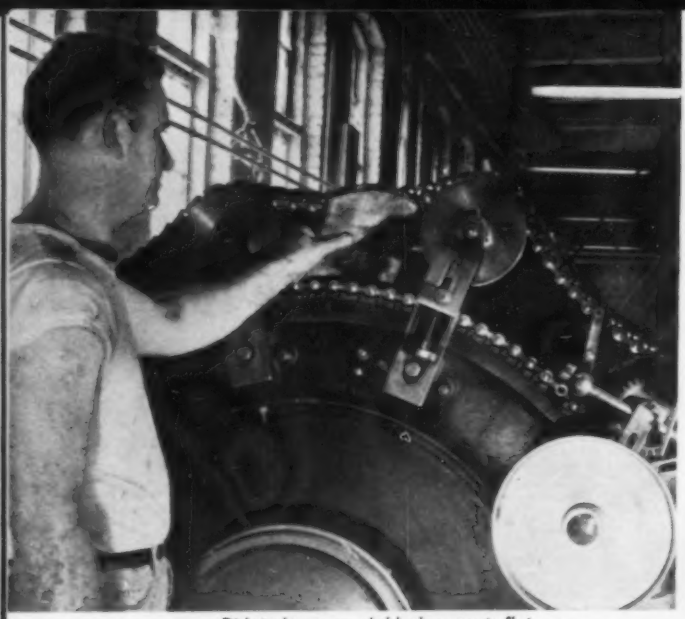
Staff prepared—Exclusive

THE FLATS could be pushed outward from the cylinder at five different points, but they could be pulled toward the cylinder in only three places. So, some of the flexible bends were permanently formed in curves which held the flats too far from the cylinder in several places.

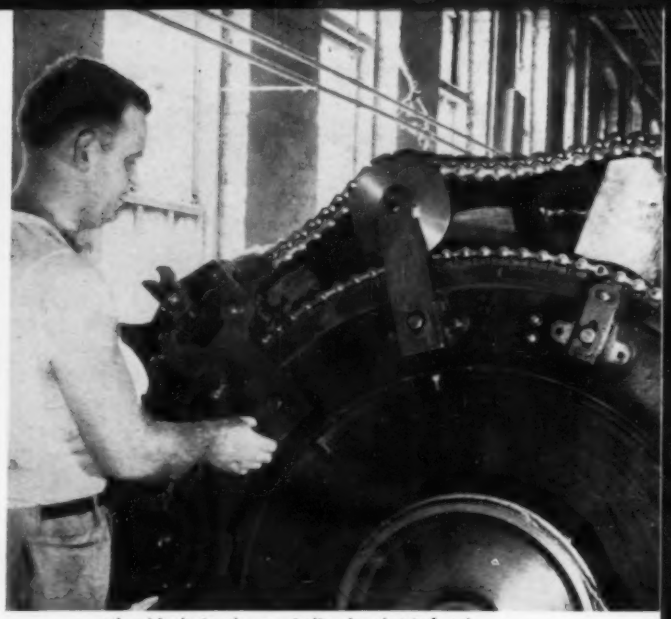
Quality demanding that the flats be correctly set to the cylinder, management at Canton Cotton Mills, Canton, Ga., laid plans to install special parts to allow the section men to pull the bends in at all setting points. While this difficulty was being corrected, attention would be given another condition beginning to need correction.

At the point at which the flats, as they move into carding position, first touch the bends a groove finally appears across the faces of the flexible members.

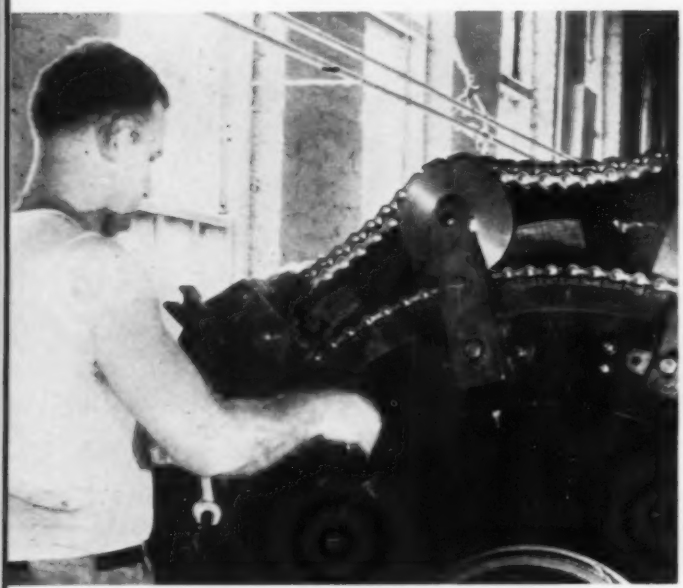
Eventually the groove will grow so deep that it permits the flats wire to touch the cylinder wire. To avoid this condition, the flats must be pushed away



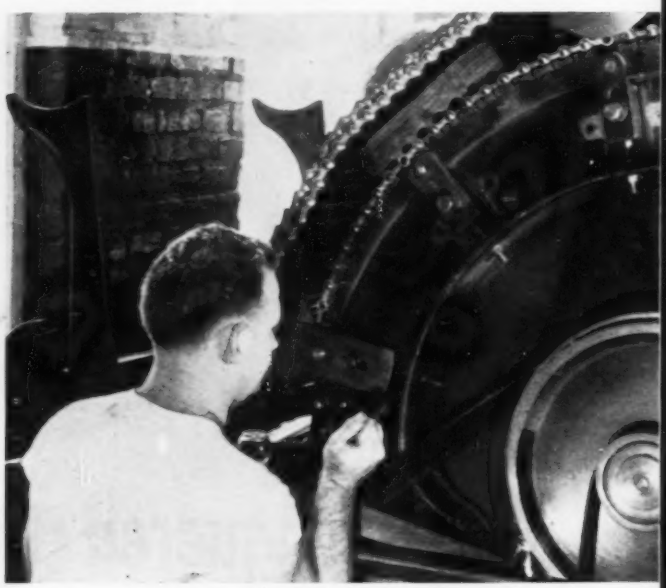
Disk to be removed, block supports flats . . .



. . . other blocks in place, grinding bracket is freed . . .



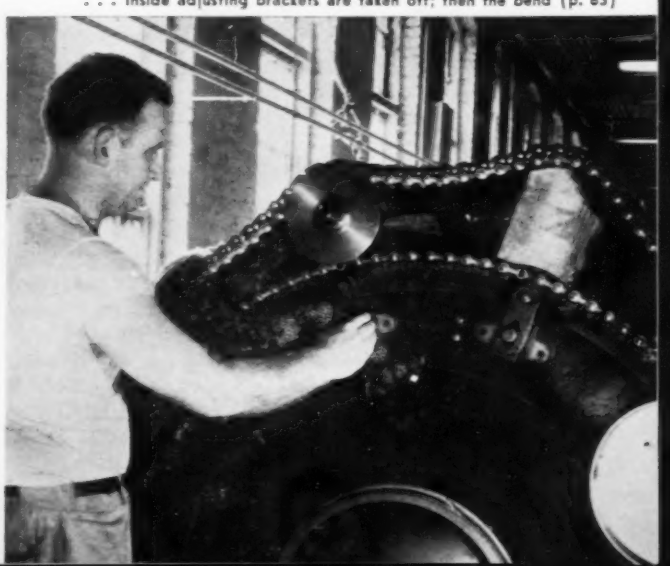
. . . and removed . . .



. . . rear support bracket is loosened . . .

. . . and pulled off . . .

. . . inside adjusting brackets are taken off; then the bend (p. 83)



from the cylinder to the detriment of good carding. These grooves had to go.

By the time a few sets of bends had been factory refinished, the master mechanic, Ernest (Shug) Holcomb came up with a solution which would permit the grinding to be done in the plant's shop.

The "solution," consisting mainly of a large wheel to which the bends can be secured, and an abrasive wheel powered for the work at hand, is a robust precision grinder—rugged enough to support the bends accurately under heavy grinding, and precise enough to eliminate unwanted motion. With it a lone mechanic can perform the entire grinding routine on a set of two bends within a few minutes.

Once the flexible bends were all restored to good condition, the firm, on a fee basis, began regrinding bends belonging to competitive firms. That service is still being performed.

Naturally, in planning so much work in the card room, management was concerned with the amount of lost production the program could introduce, and laid plans to minimize it—extra sets of bends; setting points to be changed while the cards were down for bend regrinding; a "by the numbers" routine for removing and replacing the bends, etc. Step-by-step procedure for removing the bends is illustrated on the opposite and preceding pages. Bend replacement is effected by reversing the procedure.

One overhauler was able to remove the bends, install the parts for the new setting system, and replace the refinished bends at the rate of two cards per eight hours.

How the engineer approaches the problem of quality control

by K. V. Chace
Berkshire Hathaway, Inc.

Abstract*

■ BASICALLY, the engineer's approach to quality control is to give management that which it needs. Obviously, management needs information either stating that quality is within control, or if it is not within control, the steps required to bring it back within control.

It has been our general experience that management also wishes to be bothered as little as possible when quality is in control and wishes to be wakened with a loud alarm when quality goes out of control.

Our company manufactures fine cotton and synthetic fabrics. Over a period of years, there have been established the following sources of quality information:

1. Results of routine testing of product in process.
2. Results of routine testing of the final product.
3. Results of routine inspection of the final product.
4. Results of investigations of changes in equipment, processes, and methods.
5. Customer complaints.

WE HAVE found that it is essential that control charts be kept for averages and ranges on each of the routine tests being run. In a multiplant operation, the control charts are kept in the individual plant laboratories for use by the individual plant superintendent. We have found that tabulated reports cannot be used as a substitute for graphs.

Figures from the individual plant laboratories are also tabulated in the central laboratory so that, at the end of the given period, summaries may be made up for distribution to top management.

In addition to the rotating control graphs, top management is given a biweekly report showing the figures for each of the yarns being tested, as follows: average yarn counts, average range of yarn counts, average skein break, average range of skein break, average strength factor.

At the end of each year's operation, summaries are made by yarn by plant, and the performance of the plant is reported in comparison with standards established for average yarn counts, range of yarn counts, average skein break, range of skein break, and strength factor.

New control limits are figured annually based upon the summaries. If improvement is indicated in a particular yarn, the new limits are established. Under no circumstances are control limits widened to accommodate changes of this type without the consent of top management.

The annual report showing a comparison of yarns from the various plants is issued to top management and to each of the individual plant superintendents.

THE NEXT source of quality information is the result of final product testing. On grey and finished fabric, final products are tested for compliance with the standard textile standards.

Results of these tests are tabulated by lot or date as available and are again plotted on a variable-versus-date graph. Because of the time consumed in making individual tests and also because of industry wide standards in use, control limits have not been established as a part of quality control on final product testing. Graphs are used to detect trends.

The third source of information mentioned is the result of final product inspection. As in most mills, all the fabric produced is inspected and graded into various qualities. Results of this 100 per cent inspection is available for quality purposes.

In general, all of our plants use a point system of inspection in which the various defects are weighted in different degrees depending upon their seriousness.

At the same time, as the fabric is recheck inspected, it can also be checked for some of the physical properties, which are best checked on large samples, example being the yards per pound, width, average sley and pick. These are checked by the recheck inspectors as they go through the individual pieces from the bales.

CUSTOMERS form a valuable source of quality information, often detecting trends before they become serious and allowing the corrections to be made before large claims are involved.

It is felt that the complaints should definitely be handled by a quality control department.

It is, of course, also essential that supervision be kept fully informed as to the customer complaints that occur, their seriousness, and their cause.

*From a paper presented at the eighth annual conference of the Textile Division, American Society for Quality Control.

Close-up photo of a slasher equipped to do overwaxing, showing the warp lubricating unit. The smooth roll to the left of the fluted roll in the center of the photo is the one which applies the wax to the yarn.

by Robert Bayles
Exclusive

ONLY A short time ago I attended a conference of mill men, and in the course of the meeting the talk got around to warp lubricants—their methods of application, reaction of slasher presser rolls to the presence of the wax, etc. I listened with interest, because the subject brought to mind an 80-square weave room operation on carded and lubricated warp yarns.

The dramatic change resulting from the wax application was in improved loom appearance, but there were other changes even more important.

The wax-coated fly does not stick to the loom stubbornly. Although the amount of fly taken from the room did not appreciably decline, the amount wiped or rubbed from the looms did. The cotton does not "grow" on the surfaces which hurt the weaver most—in the harnesses and among the drop wires, etc., but is easily blown from all surfaces with an air hose. This cleaning is on a 24-hour schedule.

The shuttles pick up enough wax to polish themselves and the box leather to mirror finishes. The gloss itself is not so important, although it does reduce drag, but the presence of the wax in and on the leather reduces its sensitivity to humidity changes.

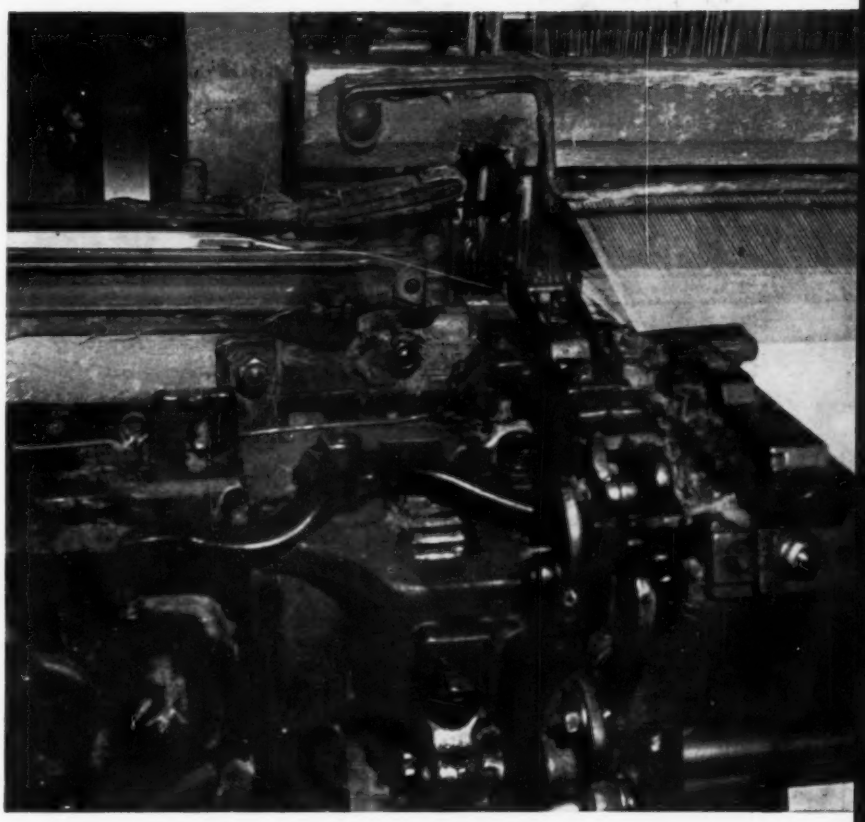
Tests conducted to determine the influence the wax had on weaving efficiency are shown in the table, data for which were obtained from 30s warp yarns containing 0.335% lubricant. Tests conducted on combed 30s yarn showed no improvement.

The wax is applied with one of several available types of applicators, attached to the slasher at or near the delivery end. To apply the necessary or desired amount, the slasher speed governs the wax applicator roll speed. This roll, running in the wax emulsion, applies a coating to the dry yarns just before they are rolled up on the loom beam.

The emulsion is maintained at a constant temperature, in this case 180 F, to control its viscosity. It is

Cotton mill overwaxes carded warp yarns and gets

cleaner looms, fewer stops



Note absence of lint on the loom in this photo which was made just after the loom had been blown off. Wax-coated fly is much easier to blow off the machine parts.

Loom Warp Stops per Hour

Waxed Warps

Yarn Count	Test Number	Number of looms in test	Warp stops per loom hour	Efficiency	Warp stops per hour*
30s	1	23	0.342	97.41	27.81
30s	2	23	0.247	96.77	20.22
30s	3	23	0.252	97.35	20.50
30s	4	23	0.387	95.61	32.06
30s	5	23	0.275	94.27	23.11
Averages: (891 loom hours)			0.301	96.28	24.76

Unwaxed Warps

30s	1	65	0.387	95.31	32.16
30s	2	65	0.389	94.20	32.70
30s	3	65	0.349	94.78	29.16
30s	4	65	0.304	95.53	32.06
30s	5	65	0.343	95.49	28.45
Averages: (2518 loom hours)			0.354	95.06	29.49

*The warp stops per hour have been adjusted to 90% efficiency. No mechanical stops are included in the tests.

this controlled viscosity, coupled with applicator roll speed synchronized with the slasher speed, that assures a uniform amount of wax applied to the yarns.

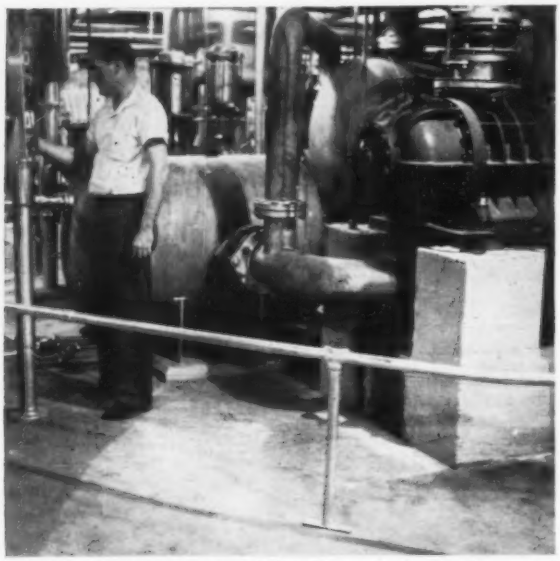
Humidity may affect waxed yarn adversely, and cause balling. If this condition is noticed following the first application, then probably the wrong wax is in use. There also is a chance that soft warps are on hand, a possibility that will have to be ruled out. Too soft wax will ball, and a harder wax will have to be selected.

Operator Vernon Knight unloads the closed-system dryer. Note counterbalanced lids on kiers. Hold-down clamps need be only hand-tight.

How to dry large packages

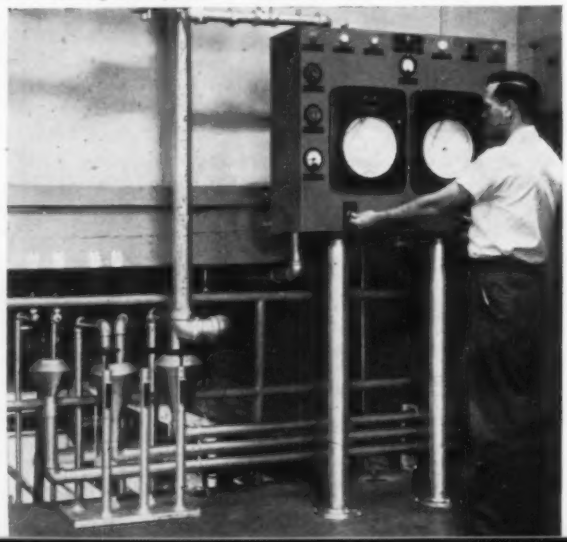
Why Wehadkee Yarn Mills chose a closed-system dryer

Staff prepared—Exclusive



Working parts in basement, including blower, heater, condenser, and automatic valves. Overseer James Sisk inspects pressure controller.

Drying cycle is controlled automatically until kiers are ready to be unloaded. The funnels at the left allow visual inspection of moisture coming from yarn, as well as water flow from condenser coils.



UNTIL recently, Wehadkee Yarn Mills, Chinnabee Mill Division, Talladega, Ala., was dyeing yarn on one-pound packages. A few months ago it was decided to convert to larger packages. The larger packages are wound on 6¾" x 1⅝" dye tubes.

The first step was to convert the carriers of the dyeing machines to handle the larger packages, and to get the larger tubes. Since the drying machines which the mill had in place would not handle the capacity of the dyeing machines after the switch to larger packages, it was then necessary to install a dryer which would do the job.

After investigating the various types of rapid package dryers available, the mill decided on one which has a completely closed drying system, and requires no air from the atmosphere during operation, making air filters unnecessary.

The air is blown through steam coils to raise the drying temperature to the preset level required. which at Wehadkee is about 270 F. After leaving the steam coils the air passes through the yarn and onto condenser coils, which remove the moisture. The air is then returned to the intake of the blower.

Static pressure is maintained at about 57 psig by the use of compressed air. Moisture from the yarn is trapped out of the system without loss of air pressure.

THE FEATURES of the machine which led to its selection by Wehadkee Yarn Mills include the following:

1. Short drying cycle—approximately 600 pounds of yarn is dried in 1½ to 1¾ hours. This drying time could be cut in half if Wehadkee's yarn carrier design permitted the use of a larger blower as explained below.

2. Better quality yarn, due to the short drying cycle; the closed system, with proper humidity assured by continual recirculation of air; and no contamination by foreign matter from the atmosphere.

3. Low drying costs, due to the completely auto-

matic operation, and power consumption of about 0.1 KWH per pound of yarn dryed.

4. Flow of materials through the dyehouse is accelerated, which means more efficient use of carriers and faster delivery of the yarn to the customer.

5. The closed system does not expel any hot, damp air into the dyehouse.

The piping system of the dryer, including heater and condenser housing, is of stainless steel, as are the kiers. Heater and condenser coils are heavy duty cupro-nickel alloy tubing. The lids of the kiers are of cast carbon steel, counterbalanced for ease of opening and closing. Another feature of the lids is that the hold-down clamps only have to be hand-tight, making the fastening of the lid an easy operation. The packing groove at the top of the kiers has an inlet which allows internal pressure to be exerted on the top kier packing, insuring a pressure-tight fit.

Wehadkee's yarn carriers contain only 14 dye spindles each or a total of 28 spindles per two carriers. This gives a total open area of approximately 22 square inches in the bottom openings of the dye spindles. A total open area of only 18.6 square inches is required for full efficiency of the 75-hp blower used to operate the blower system. After the initial start-up, the motor requires an average of 45 to 50 amperes during the drying cycle. The new dryer replaced two open port dryers, each of which required a 100-hp motor—a considerable saving in power.

Wehadkee considered the purchase of a dryer with a 125-hp blower which would have dried their 600-lb batches in 45 to 55 minutes, but the larger blower required an open area of 37 square inches, which was not available in two carriers. Since their dyeing machines are all two-kier models they decided that a two-kier dryer met their production requirements, even though it meant longer drying cycles because of the necessity of using a small blower.

THE CONTROL PANEL has two control instruments—one for setting drying temperature and ending temperature, the other for setting and recording the temperature of the water passing through the condenser.

Other indicators on the panel include blower intake pressure, blower discharge pressure, outside-in extraction timing control, blower motor load in amperes, kier pressure, plant air pressure, switches for starting and stopping, and indicator lights for the various operations.

THE YARN from the new dryer has a much softer hand than yarn from the old blower-type dryers, because it is not over-dried. Moisture content as it comes from the dryer is 2 to 3 per cent.

All types of colors and bleached yarns are being dried. The yarn is first vacuum extracted, which cuts the drying cycle by 10 to 15 minutes. Some direct dyes which tend to migrate are dried at a lower temperature, which of course increases drying time.

The new dryer at Wehadkee is the Avesta, manufactured by Gaston County Dyeing Machine Co., under license from Avesta Jernverks Aktiebolag, of Avesta, Sweden.

12 new and revised standards for textiles

■ AVAILABILITY of twelve new and revised standards for the textile industry has just been announced by the American Standards Association. They were submitted to ASA for approval by the American Association of Textile Chemists and Colorists and the American Society for Testing Materials, joint sponsors of the project in Textile Test Methods.

They are:

New

L14.70-1956 American Standard for Colorfastness of Silk Textiles to Mill Washing AATCC Standard Test Method 4-52

L14.71-1956 American Standard for Colorfastness to Dry and Wet Heat (Hot Pressing) AATCC Tentative Test Method 5-52

L14.72-1956 American Standard for Colorfastness to Rubbing (Crocking) AATCC Standard Test Method 8-52

L14.77-1956 American Standard Changes in Wool Textiles (Accelerated Test) AATCC Tentative Test Method 41-52

L14.79-1956 American Standard Evaluation of Penetrants for Mercerization AATCC Tentative Test Method 43-52

Revised

L14.2 - 1956 American Standard for Colorfastness to Acids and Alkalies AATCC Standard Test 6-52

L14.5 - 1956 American Standard for Colorfastness of Wool Yarn to Fulling AATCC Standard Test Method 2-52

L14.6 - 1956 American Standard for Colorfastness of Wool Textiles to Mill Washing and Scouring AATCC Test Method 1-52

L14.82-1956 American Standard for Evaluation of the Resistance of Wool Oils to Oxidation in Storage AATCC Standard Test Method 62-52

L14.83-1956 American Standard for Colorfastness to Water AATCC Standard Test Method 63-52

L14.86-1956 American Standard for Damage Caused by Retained Chlorine AATCC Tentative Test Method 69-52

L14.88-1956 American Standard for Shrinkage of Wool Hose: Accelerated Test AATCC Tentative Test Method 73-53

Important standard work is also done in this field by the International Organization for Standardization (ISO), Cyril Ainsworth, deputy managing director of the American Standards Association pointed out. "The fact that these twelve standards have been approved by the ASA, which is the U. S. member of the ISO, means that U. S. textile people will have a unified national viewpoint to present in the preparation of any international standards through ISO," Mr. Ainsworth said.

Copies of the standards are available at 30 cents each from the American Standards Association, 70 East 45 Street, New York 17, N. Y.

By permitting management to plan time out for equipment repairs, the preventive maintenance program takes the "break" out of "breakdown."

At Woods Mfg. Co. regular inspections and attention to repairs

Keep downtime cost low

Staff prepared Exclusive

FOLLOWING World War II, the Woods Mfg. Co., Ltd., resumed its long-range program of reorganization and modernization at its Empire Cotton Mills division in Welland, Ontario. This extensive program, which is now largely completed, reached into every operating department and called for major structural changes as well as additional construction.

Among the completed physical projects are modernized yarn manufacturing operations and a weave room with high speed automatic looms and air-conditioning system with humidity control; these, along with a more practical relocation of some operations, have resulted in higher quality and increased productivity.

When the program was nearing completion, management decided that a reorganization of its mechanical department was forthcoming and simultaneously laid plans for a preventive maintenance program. It was management's belief that a properly organized maintenance program would keep downtime costs low and help maintain the high level of production.

In view of the extensive operations at Empire Cotton Mills, manufacturers of denims and industrial fabrics, with sufficient yarn manufacturing operations to keep 487 modern, high speed looms in operation, and sizable wet-processing operations, the preventive maintenance program would have to be well-organized and soundly administered.

Mechanical Staff. The major functions of the program, which is now in full swing, include the periodic inspection of operating and auxiliary equipment; overhauling as indicated; keeping records up to date; and stocking adequate supply parts. The program would provide, of course, for day-to-day repairs of operating and auxiliary equipment.

At the head of the program is a plant engineer whose immediate staff includes a chief stationary engineer, a master mechanic, and a chief electrician (see organization chart in Fig 1), each with specific functions to perform. The plant engineer's responsibilities, al-

though necessarily broad in scope, are not entirely administrative, for he must participate actively in new projects until they are standardized.

The chief stationary engineer's responsibilities in maintenance include the steam and power plants; while the chief electrician has responsibility over all electrical equipment and instrumentation.

The master mechanic has larger responsibilities which include general mill maintenance—machine repairs, relocation of equipment and the like—and supervision of a machine shop crew. His staff also includes carpenters, plumbers (who repair air-conditioning equipment) painters and welders.

Some larger projects not directly related to manufacturing operations, such as construction work, are done more economically by outside contractors—this practice does not keep mechanical department personnel from more important production duties.

Inspection Prevents Costly Downtime. The preventive maintenance program at Empire begins with periodic inspection of operating and auxiliary equipment. This not only insures relatively trouble-free operation by pointing to the need for repairs, meanwhile acting as a check on lubrication, but also indicates the need for overhauling, which is carried out in an orderly manner on a plant-wide scale.

To assure thorough inspection of each machine, a printed form is made listing parts, adjustment and lubrication points, etc., which must be checked during inspection (see inspection forms in Fig. 1).

Although all operations are considered important, in the beginning the preventive maintenance program at Empire Cotton included only the most critical operations. As the program got under way and began to show benefits, it assumed plant-wide proportions.

Records Tell a Machine's Performance. Without accurate, up-to-date records it would be impossible to ascertain improvements in machinery performance—length of operation without costly repairs and parts replacement. Therefore,

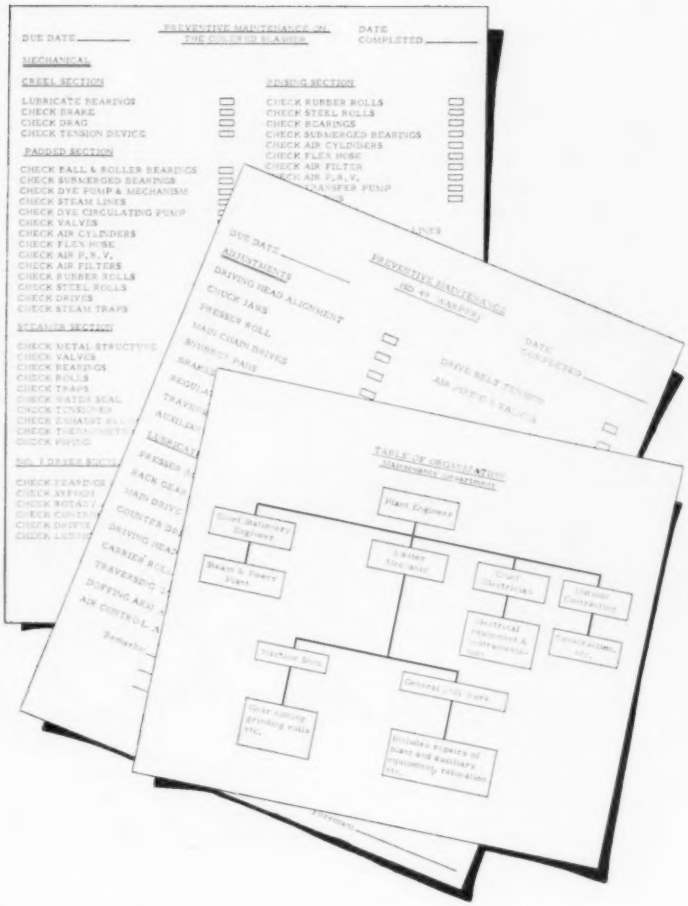
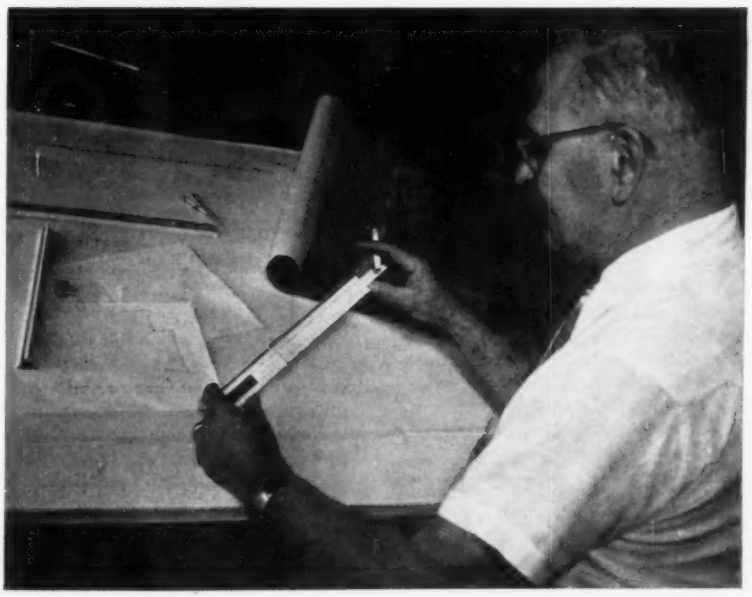


Figure 1



Plant Engineer Robert J. Seyler, head of the maintenance program, at work on engineering details of a proposed equipment layout for one of the plant's manufacturing departments.

a card-filing system, containing data on each machine, is kept up to date. It includes parts specifications, motor sizes, manufacturers and book value of the machine.

A very detailed record is also kept on every rubber-covered and steel roll in the plant, of which there are approximately 75 in number. Data concerning each rubber-covered roll include date of purchase, manufacturer, type of covering, hardness, dimensions, date of replacement, and the like. This card-filing system affords valuable statistical information and helps to pin point repeatedly troublesome areas.

Day-to-Day Maintenance Not Neglected. No preference is given to the means of communicating a request for repairs. Whether in writing or by phone, the received request is turned over to the appropriate staff member who assigns the proper man to the job. Meanwhile, the request has been made out in triplicate with one copy remaining in mechanical department files, another going to the departmental foreman, and the third copy to the person carrying out the repair work. This copy, showing details of the job, is returned to the mechanical department office for filing, cost purposes, and future statistics.

According to Robert J. Seyler, plant engineer and head of the program, the greatest benefit of the program is in preventing costly downtime through periodic inspection and consequent attention to repairs.

Over 100 mill men hear

Nucleonics in textiles discussed at Clemson

Staff report

■ TRANSMISSION - ABSORPTION radiation may be used in non-destructive testing and in thickness measurement of sheet materials such as blankets and other textiles, George Foster of Industrial Nucleonics Corp. told more than 100 members of the textile industry at Clemson College, S. C., recently.

The two-day Seminar on Utilization of Radioisotopes in Textiles was sponsored by the Clemson School of Textiles in cooperation with the Regional Advisory Council on Nuclear Energy, Southern Governors' Conference; South Carolina Textile Manufacturers' Institute; and the U. S. Atomic Energy Commission.

Measuring the thickness of coatings on window shade material and other similar fabrics is an accomplished reality, and the method affords an opportunity for rapid and accurate measurement of variables heretofore unmeasured, Mr. Foster indicated.

DR. JOHN K. KIRCHER indicated that no industrial uses have yet been found for high intensity radiation. Application may be found in measuring small amounts, such as microgram quantities, not measurable by other means. The disadvantage of having to have a package suitable to fit into a reactor and the danger of radiation must be accounted for. Cost of a Vandergraf machine was said to be $160,000 and up, and a small self-contained cobalt source is about $25,000, according to Dr. Kircher.

A LABORATORY for investigation and analytical purposes for use with radioactive chemicals may be established on a minimum basis at a cost of about $4500 to $5500, according to Irving A. Berstein of Controls for Radiation, Inc., another speaker at the Seminar.

Five steps are essential in establishing a laboratory operation, and these are: (1) train personnel; (2) effect compliance with A.E.C. requirements; (3) design the laboratory properly; (4) provide radiation safeguards; (5) secure instruments for radioactive measurement.

The cost for training is $100 to $300 per individual. There are about 70 radioisotopes available without having to secure permission; however, the Atomic Energy Commission supplies the necessary forms and information upon request for license.

Considerable reference material is available on laboratory design. The laboratory should be restricted to individuals working there, it should be separate from other areas, the level of radioactivity to be contained should be given careful consideration, the number of people involved must be noted, as well as the kind of shielding and ventilation required.

Film badges and pocket instruments should be used as well as hand counters and laboratory monitors to keep account of radiation contamination for strict control, and the necessary radiation detectors and shields must be provided as part of the laboratory equipment.

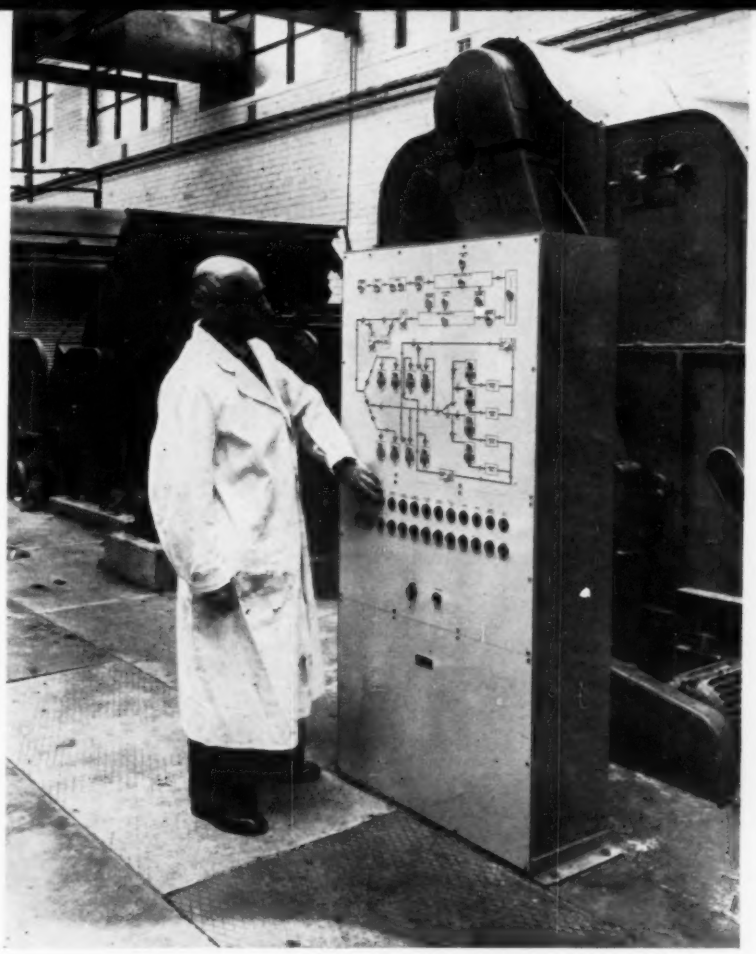
W. A. Newell, of N. C. State College, described the new radiochemical laboratory for research in textiles on the Raleigh, N. C., campus. Cost of the laboratory was said to be $30,000 for plumbing and radiation control, $10,000 for furniture, and $17,000 for other equipment, making the total cost $80,000.

AUTOMATION in a carpet mill

Blending lines controlled with graphic panels

by Leo Walter
Consulting engineer

Exclusive



One of the three graphic panels which control conveyance of the stock between processes.

A NUMBER of unusual design problems were encountered in construction of a new fiber preparation plant at Batley, England. For many years Petmar Industries Ltd. have produced needle-loom carpeting under the trade mark "Raymar," and the new plant is intended to process large quantities of widely differing grades of fibers to enable continuous production of about 5 million square yards of woven and tufted carpeting annually.

Among many novel features, the use of three mimic diagrams (graphic control panels) is responsible for automatic control of three sections of the plant. This outstanding control system will be described later.

The Automatic Blending Plant. Wet, freshly dyed fibers are delivered by overhead external conveyor from the dyehouse and deposited on an overhead platform ready to begin the journey through the plant. The fibers are then carried to the squeezer on an automatic conveyor unit consisting of a creeper sheet and a spiked sheet with mechanically adjustable beater. Most of the free water is removed in the squeezer.

Pneumatically loaded lever arms controlled by compressed air cylinders press down the upper rotating rubber covered roller. A small stripper over the roller knocks off any excess fiber.

After squeezing, the fibers are led away on another feeder sheet to an opener where the stock is loosened in preparation for drying.

Up to this point all machinery is powered by separate drives with infinitely variable speed gears, which enables adjustment to the different types of fibers being handled.

The fiber enters the first dryer, which is built in fourteen sections, each with a direct driven fan circulating hot air over batteries of steam pipes. 7,000 - 8,000 lb of steam are required per hour, operating at a pressure of 65 - 70 psi. From the first dryer the stock is passed over a cross conveyor to a second similar unit where it is finally dried and conditioned to the required moisture content. The plant can handle 3,500 lb of dried material each hour.

The correctly dried fibers are then sucked by a high velocity fan and injected into either an overhead cyclone which removes dust from certain types of fibers or into a preliminary set of storage bins in which are assembled various blends required for different types of carpet. There are eight of these bins, four of which are being filled while the other four are being emptied.

The fiber is then weighed in correct proportion in a large size hopper connected with an automatic weighing machine. Each complete load of fiber is discharged underground by the weighing machine where the materials pass through a hopper feed, fan, Centriblender, hopper feed, opener, fan into one of nineteen storage bins, each of which con-

The 19 storage bins, each holding 8,000 to 12,000 lb of stock, have a total storage capacity of 152,000 to 228,000 lb, according to the type of fiber being processed. Fiber is fed from the overhead pipes and is drawn out from the bottom through an underground duct.

tain 8,000-12,000 lb, according to type of fiber. For the proportion of melange shades a section of the blending plant with separate apparatus and six additional storage bins has been constructed.

The final blending operation takes place in another set of Centriblenders, hoppers, openers, and finally into a baling machine, which is auxiliary equipment, since ultimately the blends will be transferred through outside ducts into bunkers over the carpet production line, thus eliminating baling and transport.

Mimic Panels for Automatic Process Control. Three electric panels control the operation of the entire process, introducing a strong element of automation.

Mimic Panel A controls the squeezing and drying plant and all electric motors driving machinery on this section. The motors can only be started in their correct sequence. The panel also indicates whether the various duct switches are correctly set. This ensures a foolproof check on whether the flow of material is correctly sequenced to the various machinery and storage bins.

This is very important, since a large variety of colors of fiber are handled in the storage bins and the fiber traveling in the conveyors remains invisible until discharged into a bin. A red light on the panel shows that the bin is full; a yellow light indicates that the doors are open and the bin is being emptied.

Mimic Panel B controls all machinery operating after the fiber has been weighed and has started being made into a blend. This panel also indicates which of the nineteen main storage bins is being fed, in the same way as Mimic A.

Mimic Panel C controls all motors driving the machinery for the final blending process. It also indicates the movement of material from the 19 storage bins to various machines and also to the six storage bins associated with the melange blending section.

Continuous Control of Wool Blending. The primary object is to select the bins to be filled with certain colored fibers and to set the flow flaps accordingly. These flow flaps are fitted with Micro Switches which illuminate a green flow lamp on the diagram indicator. The switches are arranged in sequence to ensure that the correct flaps are opened for a given flow sequence and only then will the green flow lamps be illuminated on the diagram indicator.

Each engraved bin outline on the panel is fitted with a red (bin full) lamp, and an amber (bin flow) lamp. Both lamps are controlled by an electronic probe on the particular bin. The panel also contains "start" and "stop" push button control for the various feed and fan motors.

The motor starters are fitted with contacts which will illuminate a white lamp on the diagram indicator when the particular fan motor is running. These motor starters are arranged in sequence so that the correct "start" buttons must be pressed before a certain flow can be initiated.

The panel uses 24-volt, 1-amp lamps throughout, fed from a transformer. Where the connection is to a 415-volt starter, a relay with a 415-volt coil is used, the contacts of the relay operating 24-volt lamps.

Bin Control. This is a special indicator panel designed to facilitate the filling of the bins. Each bin is fitted with an electronic

Use a camera to stimulate your safety program

by Edward S. Greene
Field supervisor
Aetna Casualty & Surety Co.

Extract*

■ USE OF a camera can personalize and provide a stimulating change of pace for the safety program. The expense normally is not prohibitive, and the necessary technique is not difficult to master.

In general, there are three types of cameras that can be used—the Polaroid camera, film-pack camera, and 35-mm camera. But the ways in which they can be used are limitless. If the budget will stand it, by all means get all three. If not, start with one that applies best to your program and plan to get the most you can out of it.

The Polaroid Camera. This is the camera that gives a print 60 seconds after the shutter is snapped. It is a natural for on-the-spot evidence "right now."

For recording the temporary unsafe condition, the instantaneous practice, and bringing the evidence to a safety or foremen's meeting a few minutes later, it can't be beat. Taking a picture one month and showing it at a meeting a month later is one thing. Showing the picture at a meeting the same day is something else—with a punch that can't be easily ducked with alibis or denials.

The person responsible for the plant safety program can also have some fun with this camera. Suppose that just before a foremen's meeting he spots a hazard in the plant. He takes a close-up with the Polaroid, blocking out by composition or actual trimming of the print surrounding areas that would tend to make it easy to identify the department and locate the exact area. During the meeting he passes the picture around —possibly mounted on an 8½" x 11" sheet for easy handling—explaining that he took it just a few minutes earlier and asking the foreman responsible for the department to claim it. When this has been done, he challenges the foreman to get the condition corrected as soon as possible. In most plants this little game develops some good natured kidding and competition, providing the fun that is lacking in too many safety programs.

The main disadvantage of the Polaroid camera is that, in its present state of development, it gives you no usable negative.

Film-Pack Camera. Where an absolute minimum of time between exposure and finished print is not essential to use of the camera, a larger camera using cut film and film packs may have certain advantages.

One of the advantages of this type of camera, with a negative measuring 2¼" x 3¼" or larger, is the possession of a film negative that can give you a high grade enlargement in any quantity.

It is the camera best suited for publicity pictures for a house organ, trade magazine, or the local newspaper. It can also be used within the plant for safety pictures to be used at meetings, for general personal discussion, for progress reports, and for the record.

35-mm Camera. Many feel this to be the most versatile camera for safety engineers and safety directors. It can be used to make both photographs and projection slides. A steadily held camera plus proper processing with a fine-grain film will give high quality enlargements of almost any practical size.

To stimulate interest during safety meetings, properly prepared slides of conditions and practices in the plant cannot be matched. Slides of analyses, accident data, progress charts, and other material can be presented and discussed with maximum interest. A continuing chart of frequency and severity rates, plotted monthly and shown on the screen, will keep all members of the plant group posted. They will have a clear mental picture of how they are doing.

With a little preparation, right and wrong methods of accident investigation can be shown, giving actual examples from the files. This procedure is a valuable aid in instruction of foremen. If a plan of employee indoctrination, formal or informal, is utilized, material supplemented by recent and informative pictures or slides makes the job interesting for both employee and indoctrinator.

As times goes on, the man who makes slides for safety meetings builds up a library of slides that eventually enables him to make a talk on practically any phase of industrial safety in his plant. He can use the slides at his own safety meetings and, by proper selection, when called upon to talk to professional groups, business organizations, and other assemblages. A filing system for ready reference is a "must" for the slide maker.

*From the article "The Camera—Professional Safety Tool" published in the November, 1957, issue of The Journal of the American Society of Safety Engineers.

probe at high and low level. If the bin is full the contact is "made" and the red light at the top of the engraved bin outline on the diagram indicator is illuminated.

If the bin is empty another contact is "made" and a red light at the bottom of the engraved bin outline is illuminated. This latter lamp is controlled by a relay which is also fitted with a contact to operate a warning bell. This bell can be silenced by pressing the button on a diversion relay which is fitted underneath the low level lamp. When the bin begins to fill again the low level lamp automatically ceases to be illuminated and the diversion relay falls back to normal.

Underneath the bin outline is another lamp signal which is controlled by the flow flaps on the bin. This indicates that the bin is emptying. Also incorporated on the panel are "start" and "stop" push buttons for controlling the plant motors.

Semi-Automation Achieved. Although it is perhaps an overstatement to talk about a carpet manufacturing plant using "automation," Petmar Industries has certainly achieved partial automation, or "semi-automation," as it is often called. Believed to be one of the largest plants of its kind in Europe, it is claimed that no other semi-continuous process for large-scale fiber preparation operates on the above lines.

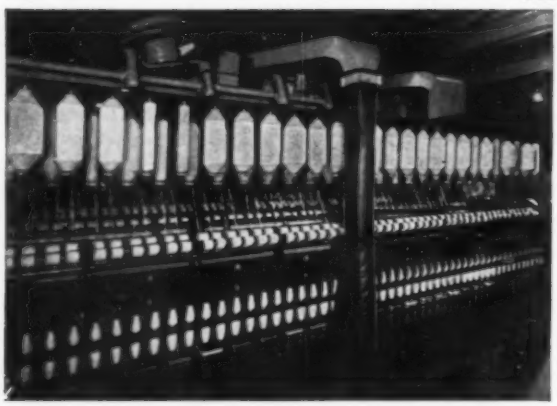
Now! MONORAIL Cleans-- Frames, Underframes, Ceilings From Track or Creels

1

New type underframe cleaner applied to standard cleaner units traveling on Monorail track.

2

Creel mounted units clean ceiling, frame, and underframe.



3

Under frame unit mounted on old cleaning system to complete cleaning operation.

Standard units for cleaning the upper part of frames — underneath the frames, and the ceilings — each individually designed to perform their particular operation.

These units can be designed for travel on either Monorail overhead track or on creel mounted Tri-rail track.

Similar automatic units are also available for cleaning weave rooms by means of single Monorail tracks over rows of looms or on crane-type units for multiple row loom cleaning.

Let an experienced textile engineer recommend the particular cleaning units to solve your cleaning problems.

AMERICAN MONORAIL

Engineered Automatic Cleaning and Handling Systems

13106 ATHENS AVENUE
CLEVELAND 7, OHIO

OVERHEAD HANDLING EQUIPMENT

MEMBER OF AMERICAN TEXTILE MACHINERY ASSOCIATION

Controlling quality in the weaving department

A practical goal must compromise between maximum weave room production and 100% first quality fabrics

by F. G. Ernest
Exclusive

THE PRIMARY purpose of modern high speed and automatic machinery is the production of more goods per unit of time, of labor, and of capital investment. How well we succeed in attaining this goal is measured by comparing our actual achievements with our maximum capabilities. The resulting ratio is our "per cent efficiency." Needless to say, it is desirable to produce at the rate of 100% efficiency, or as near to that figure as the capacity of the machinery and labor will permit.

However, we are faced with the necessity not only of producing goods at maximum rates of speed but of producing them at acceptable levels of quality as required by our customers. From the quality point of view, it would be desirable to produce 100% first quality goods without regard to other considerations.

Another factor is cost. It may be possible (theoretically) to produce cloth with no defects at all. However, such an accomplishment would be achieved at the expense of machine efficiency and would be accompanied by probable reductions in workloads, thereby reducing the productivity of each operator.

Our task is to discover those levels of quality performance and efficiency which represent a desirable compromise between maximum production and 100% first quality production. This optimum level can be determined by calculating the cost of administering a program and evaluating the increase in total value of the product derived from the program.

STARTING an analysis with the production of the cloth, and having established the acceptable quality of warp and filling yarn, a first consideration is the condition of the loom. We are interested not only in its mechanical condition, which permits continuous production, but also in its ability to produce good quality cloth. Efforts to insure maximum and smooth performance may interfere with quality control. In some instances the lubrication program may be an example of this interference.

It is imperative that all efforts be coordinated, and this can be done by having the same personnel responsible for all phases of the program. It is logical that the weavers, loom fixers, and weave room supervisors direct their efforts for both quantity and quality.

The task of checking the condition of the loom is often scheduled to be performed at specific intervals; for instance, when a warp has run out. This is sound procedure. However, such inspections alone cannot be relied upon to maintain the loom in good working condition. There must be a continuous effort to "stay on top of the job." This effort must be shared by all levels of operating personnel, including fixers, weavers, battery hands, oilers, and other employees who may come in contact with the loom.

Some mills may find it expedient to schedule daily checks, but care should be exercised to:

(1) Make sure that all looms are covered within a reasonable time.

(2) Avoid divided responsibility, causing supervisors or operating personnel to ignore certain looms which were assigned to other shifts and to consider them as "not on my job."

The objectives can be achieved by continuously stressing the fact that the entire organization is a single unit, and that its success or failure is indivisible by sections and shifts.

CLOTH MANUFACTURING is one of the few industries in which 100% inspection is feasible and is usually practiced. Complete inspection permits an accurate report on the entire performance of each production unit. In other departments such as spinning, it is common practice to get a small sample from each unit, and in many instances only a small group of units out of the total is selected.

Complete inspection has the primary function of removing all defects before the cloth is delivered to the customer. However, if 100% inspection is not utilized to pre-

vent future defects from occuring, the full potential is not achieved. Many quality control programs are based on testing relatively small samples from which statistical analysis provides information about the entire quantity produced.

The quality control program cannot be exploited without enlisting the cooperation of the cloth room and weave room personnel and establishing a workable system of liaison between them. Such a system should contain the following components:

(1) The mechanics of classifying defects quantitatively by using a point grading system or other method.

(2) General agreement among all those concerned regarding terminology. Use of improper terminology by cloth room personnel may result in fruitless examinations of areas on the loom other than those causing the defects. One example of this is a report of a "smash," when actually the warp stop motion failed to function, causing the loom to continue running with a number of warp ends broken.

(3) General agreement regarding the severity of defects.

(4) A fast communication system which will relay information from the cloth room to the weave room as soon as possible. Such a system not only entails the device used but the willingness of the personnel of the two departments to relay and to receive such information and to act upon it.

(5) Provision for all weave room personnel to observe the inspection of cloth in the cloth room at regular intervals.

(6) A procedure for keeping records of each loom's performance to determine which looms repeat and which sections and shifts produce excessive seconds. Some of this work can be further elaborated by statistical or graphic presentation.

WE ARE best able to reduce seconds at least cost by surveying our existing organization and determining how it may be used most effectively toward this objective. The main burden of any program must be placed upon line operators and supervisors. This is necessary to:

(1) Keep costs to a minimum.

(2) Place responsibility upon those who are best able to assure quality performance by their own direct efforts.

Coordinating the efforts of line and staff departments is the job of management. Management faces the constant task of providing the necessary leadership to all levels of the organization, including initial planning, determination of expenditures, organizational changes, over-all administration of the program, and the intelligent use of sound practices in human relations in promoting the quality theme.

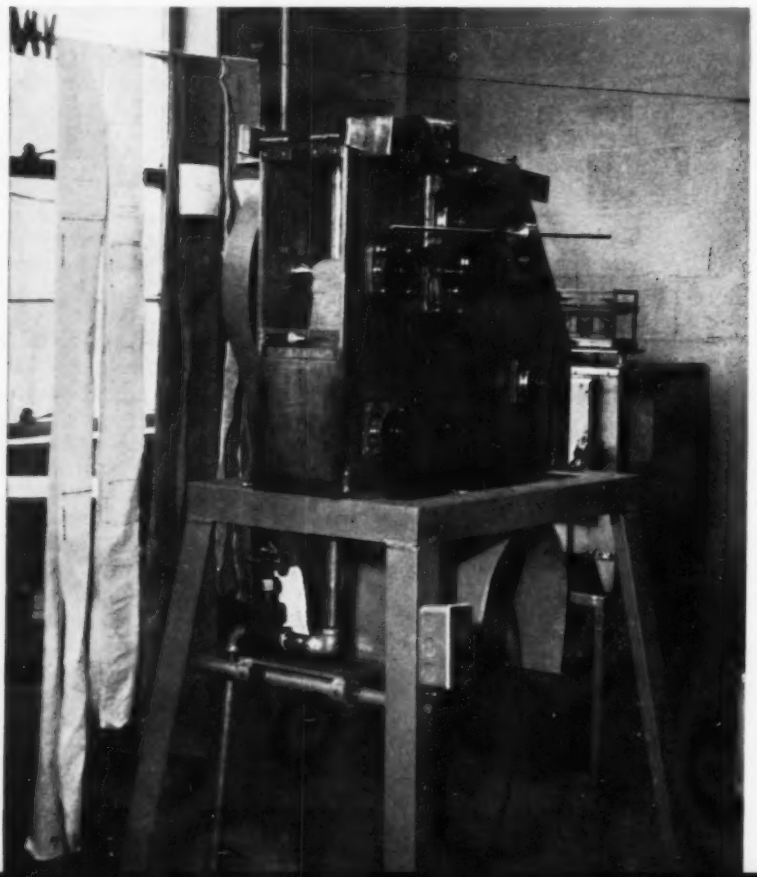
Laboratory fulling mill flexible and accurate

■ A LABORATORY wool fulling machine has been constructed by personnel at Southern Research Institute, Birmingham, Ala., for the purpose of evaluating chemicals used for wool fulling or felting.

A modification of a laboratory wool fulling machine known as the "LaFleur Machine," the SRI machine allows more flexibility in operation and more accurate control of pressures and speeds of the rolls, the announcement pointed out. Transparent plastic top and doors on the ends of the machine permit visual inspection of the operations being performed.

The machine is said to have been successfully used in developing new wool fulling and felting formulations, as well as for evaluating the effectiveness of scouring and bleaching chemicals. It has also been used to compare the effectiveness of a homologous series of surfactants to determine the relationship between chemical composition and effectiveness in fulling or felting of wool and other animal fibers.

According to Dr. Frederick T. Lense, head of the Institute's textile section, the lab-type fulling mill is not commercially available; however, Southern Research Institute will be glad to advise interested persons how a similar machine may be constructed, and possibly even build it for them.



TEXTILE INDUSTRIES PRESENTS

TUFTED TEXTILES

1958

GET ACQUAINTED WITH

This Great New Resin

TEXTILE COATING

and Impregnant . . . . .

FIBERLOK
LOCKS THE FIBERS FOR THE LIFE OF THE FABRIC
✓ Outstanding Tuft-Anchoring Properties.
✓ Readily Loads With Clay or Other Acceptable Fillers In a Wide Range of Proportions.
✓ Lower Curing Temperatures, Yet Dries Unusually Fast.
✓ Coats Evenly and Smoothly on All Surfaces.
✓ Can Be Colored or Pigmented As Desired.
✓ Lends Itself To Wide Latitudes of Modification To Meet Specific Use Requirements.
✓ Increases Dimensional Stability.
✓ Adds Skid-Resistance.

WRITE for the Technical Details of

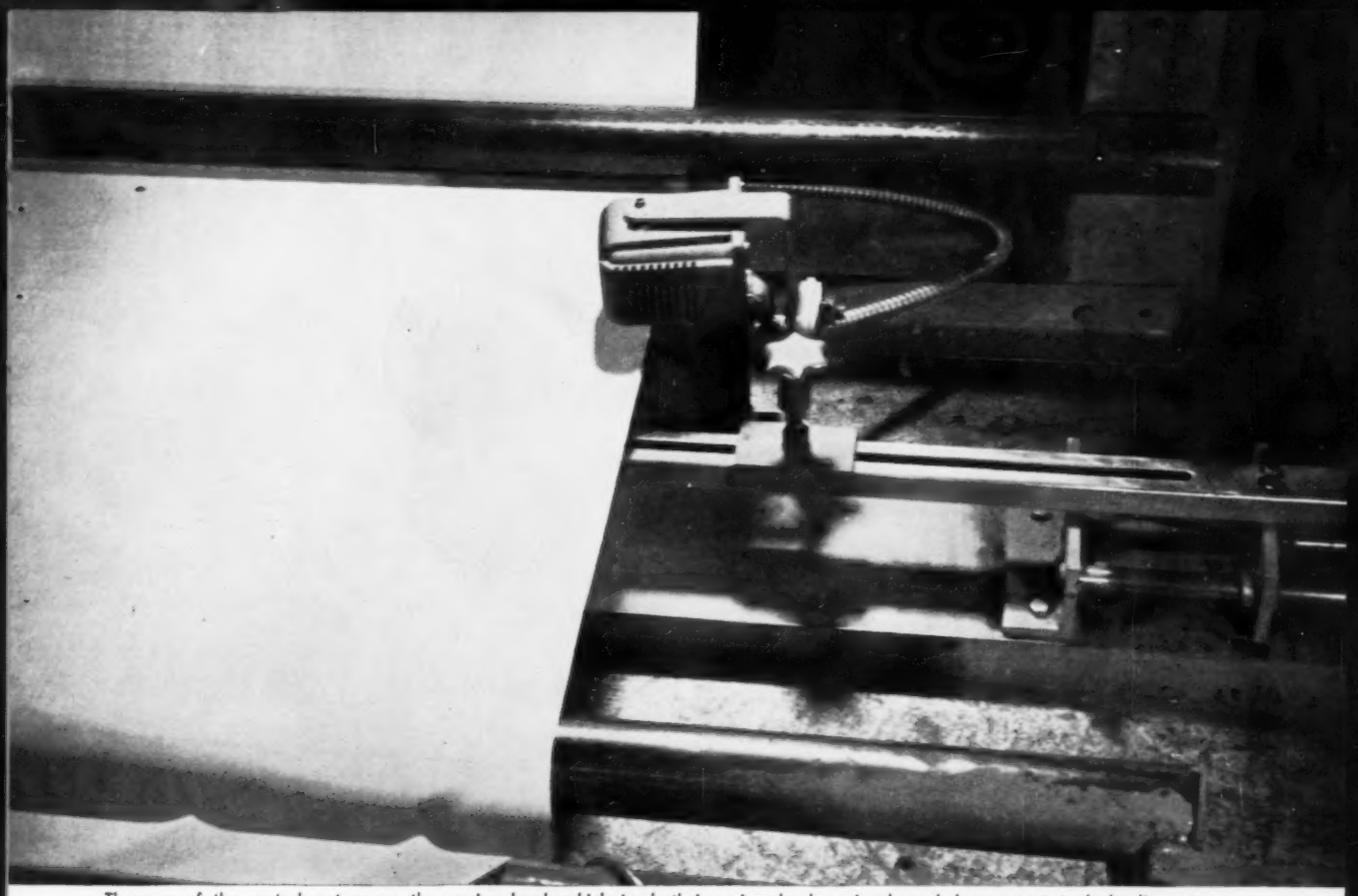
FIBERLOK

The Superior Coating For All Tufted and Upholstery Fabrics of Every Fiber, Natural and Man-Made!

SCHOLLER BROTHERS, INC.

PIONEERS IN THE BETTER FINISHES THAT MAKE THE BETTER FABRICS . . . SINCE 1907

Authorized Manufacturers and Distributors of LANOLIZED—The Miracle Finish. Collins & Westmoreland Sts., Philadelphia 34, Pa. IN CANADA: Scholler Bros., Ltd., St. Catharines, Ontario.



The eyes of the control system are the sensing heads which track their assigned edge, signal needed movement to hydraulic system.

OPERATION CENTERLINE

Web controls match the centerlines of pattern printing drum and bedspread backing, then guide the sheeting selvage to build roll with one neat end.

Staff prepared Exclusive

AT THE Dalton, Ga., plant of Lawtex Corporation, bedspread patterns are printed accurately and "on the run" through the aid of two electro-mechanical devices, Centrol* and Edgetrol.* The controls combine their abilities to reduce by some 20% the personnel needed for the printing operation. The system accommodates cloth from 18″ to 122″ in width.

Tufting machines will operate more economically if the backing fabric is uniform in width. This uniformity permits manufacturers to tuft the full fabric face without having selvage needles now and then run out of cloth and stab at the air.

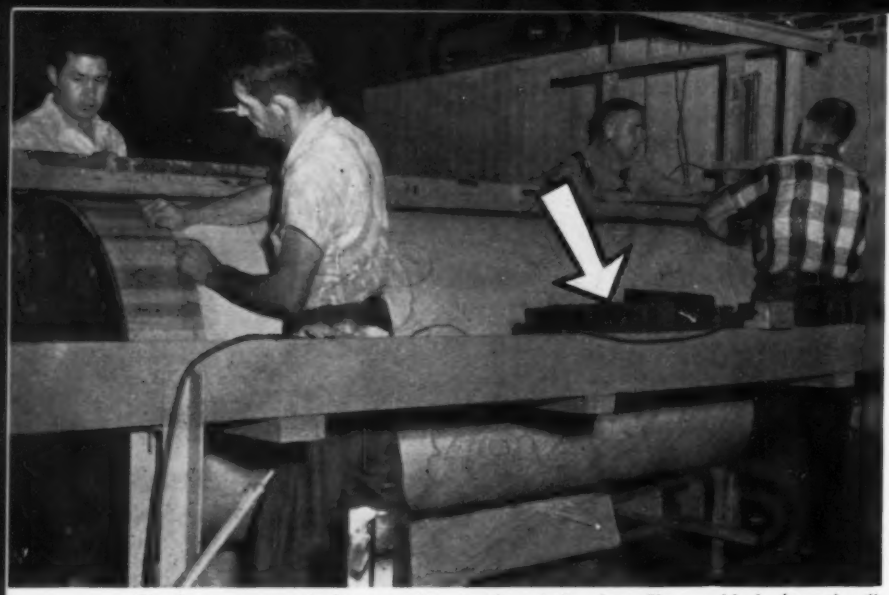
An alternative to tufting on fabrics with nonexistent perfect widths is to keep one cloth selvage straight, or passing along a predetermined point as it passes through the machine. With width fluctuations thus being restricted, it is not so difficult for the manufacturer to plot a straight tufting course inside the remaining and wandering selvage. This is where the Edgetrol enters the scene by packaging the printed sheeting into rolls with one selvage aligned to form a "square" roll end. The "square" end permits this aligned selvage to be unrolled accurately into the yardage machine. Still another effect is achieved by the Centrol.

To be printed properly, the sheeting must be guided from the original supply package onto the printing drum containing the pattern. And to be correct, the pattern must be centered in the sheeting regardless of fluctuations in the cloth width. By shifting the cloth roll stands right or left, the Centrol delivers the centerline of the sheeting to the centerline of the pattern with an accuracy of ⅛″ to 3/16″.

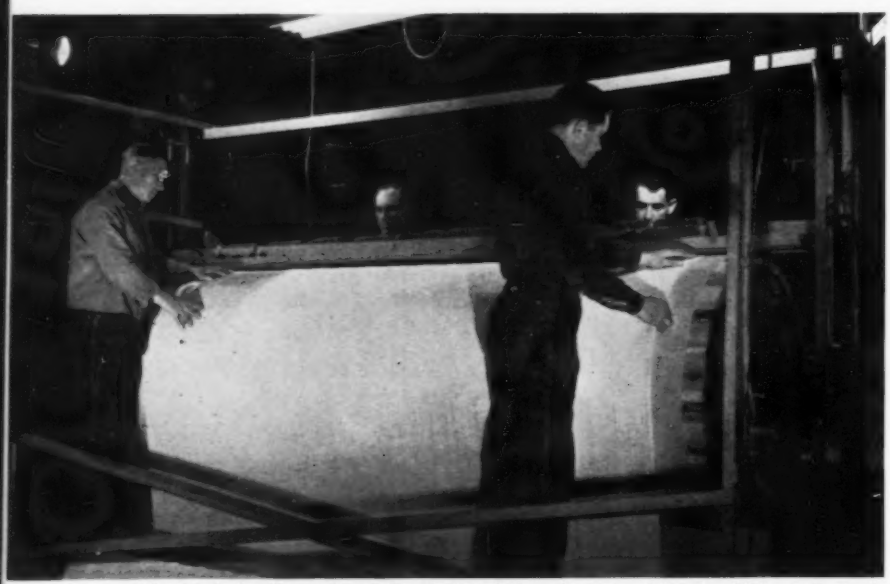
Basically the system consists of the two parts just mentioned—the centering system which operates the supply or let-off roll, and the single edge-control system which operates the wind-up.

A sensing head straddles each selvage as the cloth is pulled from the supply roll. Each head contains two light beams which actuate the centering devices as the light

*Made by Intercontinental Dynamics Corp.



The four men are attaching a pattern to the printing drum. The wax blocks (arrow) will be placed in track atop drum (below) to mark the pattern on the rolls of plain sheeting.



The blank sheeting is inserted and started through, centered by the shifting roll stands.

The hydraulic system supplies motive power to centering sensing heads and stand.

beams are interrupted by the wandering selvage.

As long as the edge of the web material remains between the two light beams, no correction is applied. Should one of the beams open or close, as the case may be, a circuit is closed which actuates a solenoid valve in the control's hydraulic system. This action in turn moves the piston of a hydraulic cylinder in the proper direction to return the web to the "dead zone" between the two light beams. The response time is good: The sensing device can accomplish switching operations in micro-seconds.

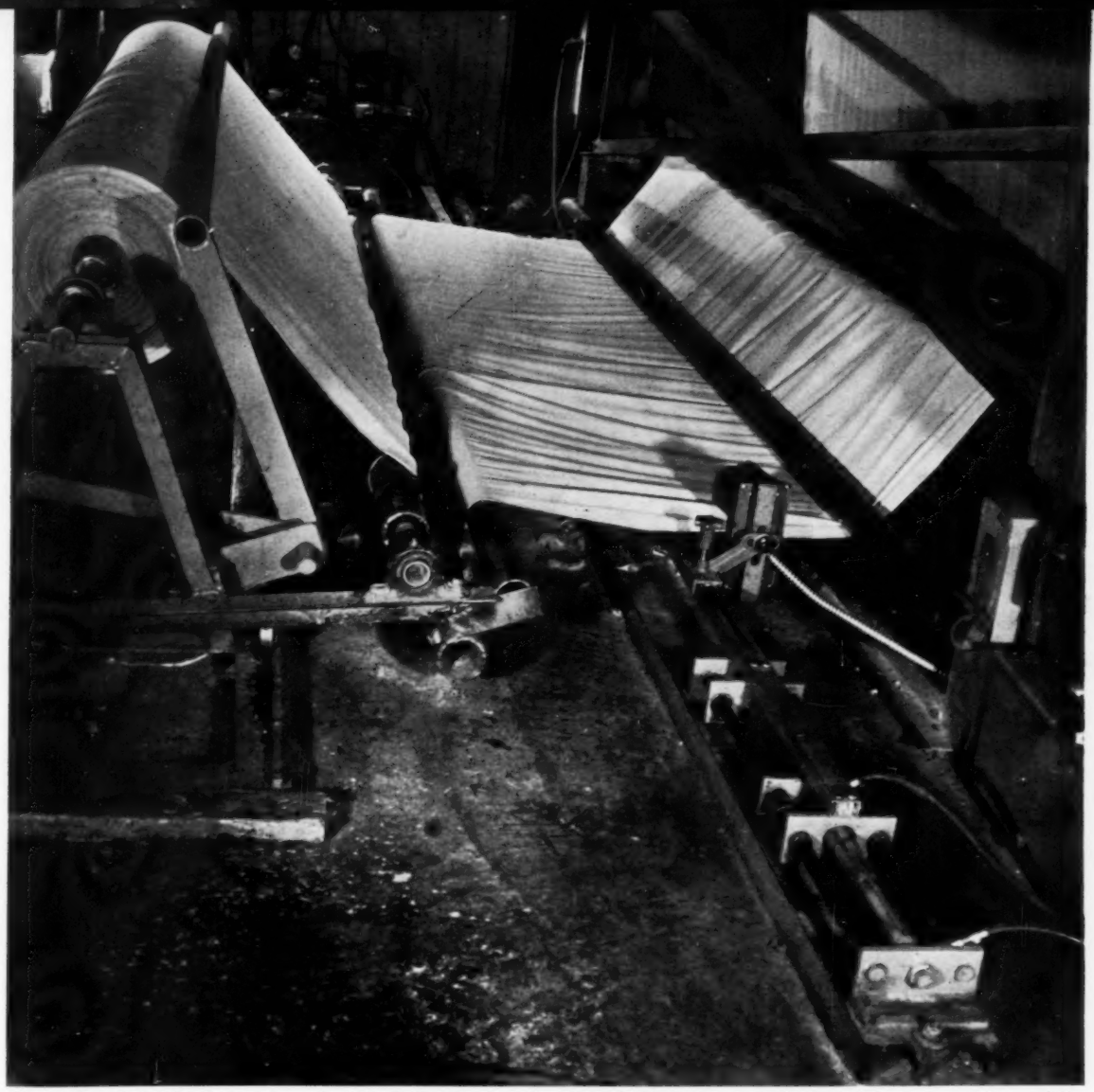
Each sensing head is mounted in an individual carriage which is driven by its own hydraulic cylinder. The combination of sensing head, control box, and hydraulic pump comprises a closed servo system---in essence, each sensing head tracks its edge of the material.

Each tracking head is connected mechanically to a mechanical differential consisting of two gear racks. These two racks drive a pinion which is attached to a small, freely sliding carriage. To this small carriage is attached a cam. As the carriage moves left or right, the cam closes one or the other of two Micro Switches.

In this manner the sliding carriage acts as the center line of the web. The switches in the differential operate a three-way solenoid valve on the let-off roll's hydraulic system which causes the let-off roll to move left or right.

For example, if the web should narrow from 120″ to 119″, with the change occurring on the right side of the web, the right sensing head would move in one inch and carry its attached rack with it for that distance. The carriage with pinion would move only ½″ because of the ratio of gear teeth, rack to pinion. The centerline would move ½″ to the left.

Consequently the Micro Switch would actuate the let-off roll hydraulic system to move to the right ½″. As this happens, the entire web (assuming it is still 119″ wide) will be moved to the right ½″, and the left tracking head will move ½″ to the right. This means that both racks move ½″ to the right, and since both racks are moving the same amount at the



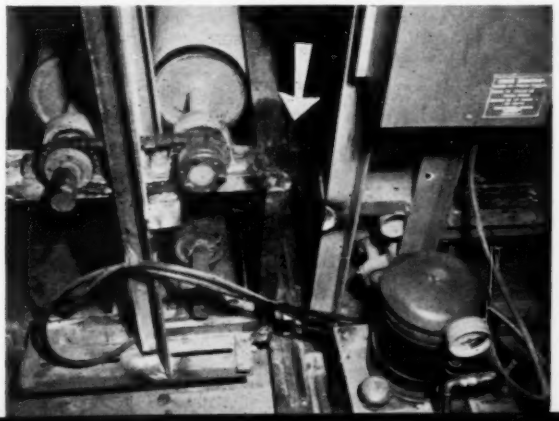
The supply roll for the sheeting is at the left. Guiding heads and package (roll) stands are track-mounted for motion right and left.

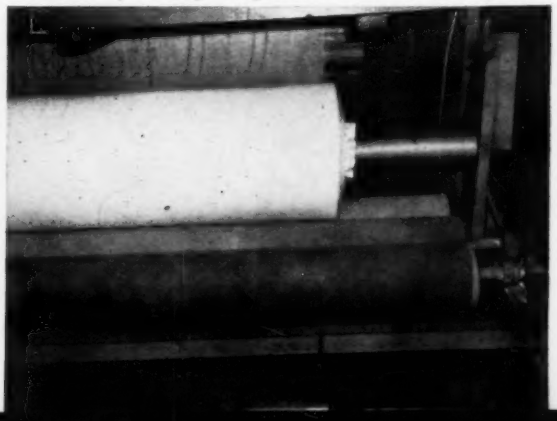
same time, the pinion will also move to the right ½".

Actually, the above example serves to illustrate only one simple condition. The system must meet all combinations of movement and web speed, but it should be designed for the individual machine it is to operate. The components remain the same for all applications.

Lawtex has found that the system's speed is more than sufficient. As it stands, Lawtex is able to print approximately 25% faster than in the pre-Edgetrol days there, and this, remember, is with 20% fewer personnel consigned to printing.

Operating independently of the centering device, the control at the front (sensing head, arrow) guides edge to form neat roll. The roll-up head shifts right or left to adjust for the edge variations introduced by sheeting being tracked onto the printing drum.





MARCH OF THE TUFTEDS

A glance at the progress of a year

Staff prepared Exclusive

(We have fitted together this part of the tufting scene from statements we gathered in interviews with executives in the tufting industry. We pass the information on to you, unchanged except for the relative emphasis we have given the various parts. — The Editors)

ONE YEAR ago carved or sculptured patterns in two or more colors were tufted by increasing the tension on those ends selected to disappear from the pattern for a space. The increased tension shortened the loops and permitted companion ends, operating free of such tensions, to form long loops to screen the short ones.

Present equipment lends an alternative to that situation by cutting the pile yarn and letting the needle remain idle (lifting it clear of the appropriate area). The idle needle does not perforate the backing in the areas it is to skip.

The sculpturing effect is heightened by the presence of a ground pile of different color if desired. This pile is tufted in short loops in a separate pass. In the absence of such pile, the backing forms the background for the carved area. The machine will produce cut pile only.

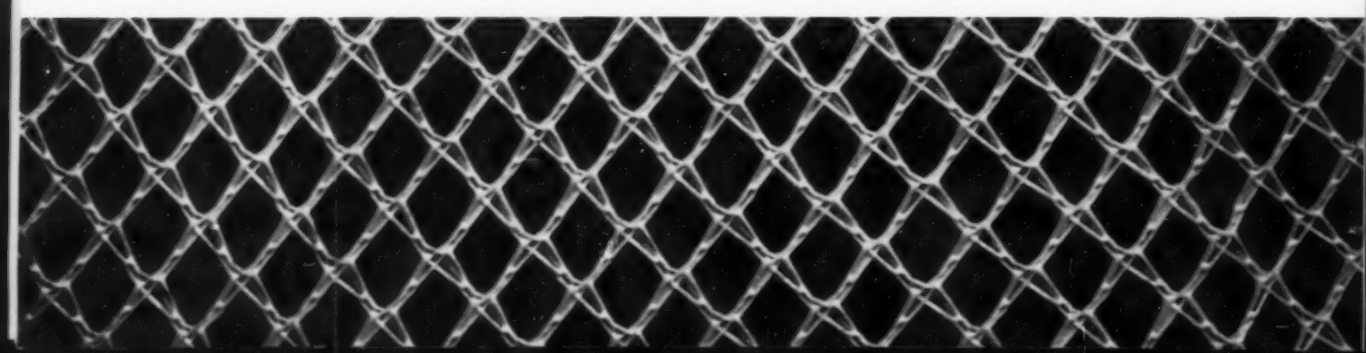
Individual needle control is not limited to electronics. At least one machine is now available which controls the tufting needles mechanically.

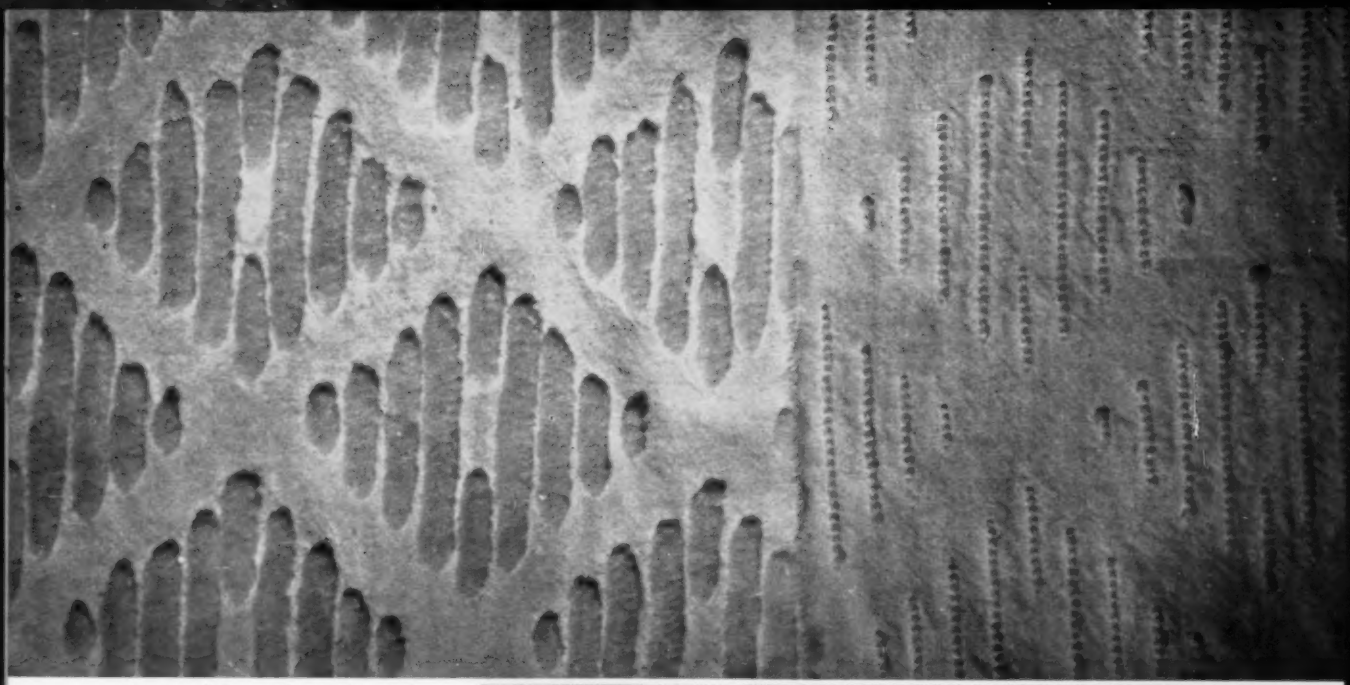
The pattern drum, illustrated on page 126, for this machine is as long as the machine is wide—up to 18′.

Table models of the machine, containing up to 24 needles, are produced by the supplier of the large units. The machines produce cut pile only.

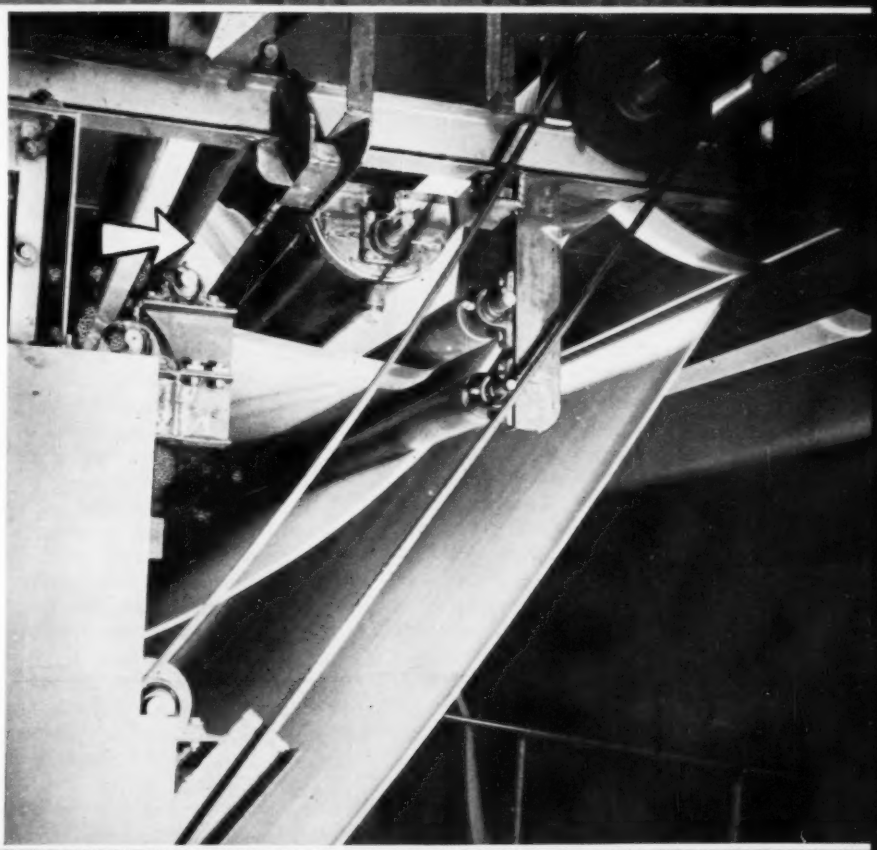
No equipment has been announced for cutting selected areas

(Continued on page 126)



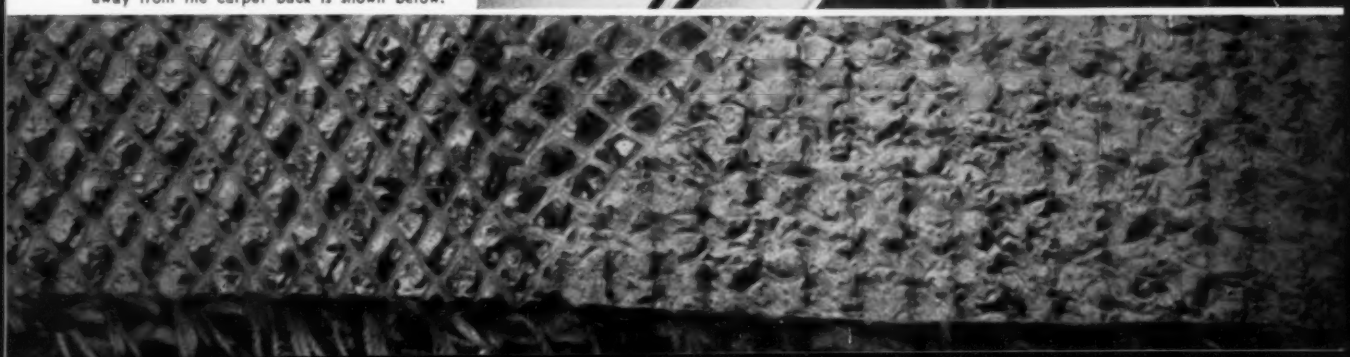


A close-up of the needles of the electronic needle tufting machine (top, opposite page). Each needle is controlled by the pattern drum, which moves the needle in or out of action. The pile is cut and held against unthreading until the respective needle is needed again. In use at J. T. Bates Candlewicks, Dalton, Ga., the machine was producing the above pattern when the photograph to the left was taken.



Scrim, a newcomer to the carpet industry, is applied to the back of carpets to add dimensional stability. A fold of the carpet is removed from the latex curing oven and threaded through a series of rollers, one of which applies pure latex to the scrim (arrow). The two layers are then returned to the oven for the vulcanizing action.

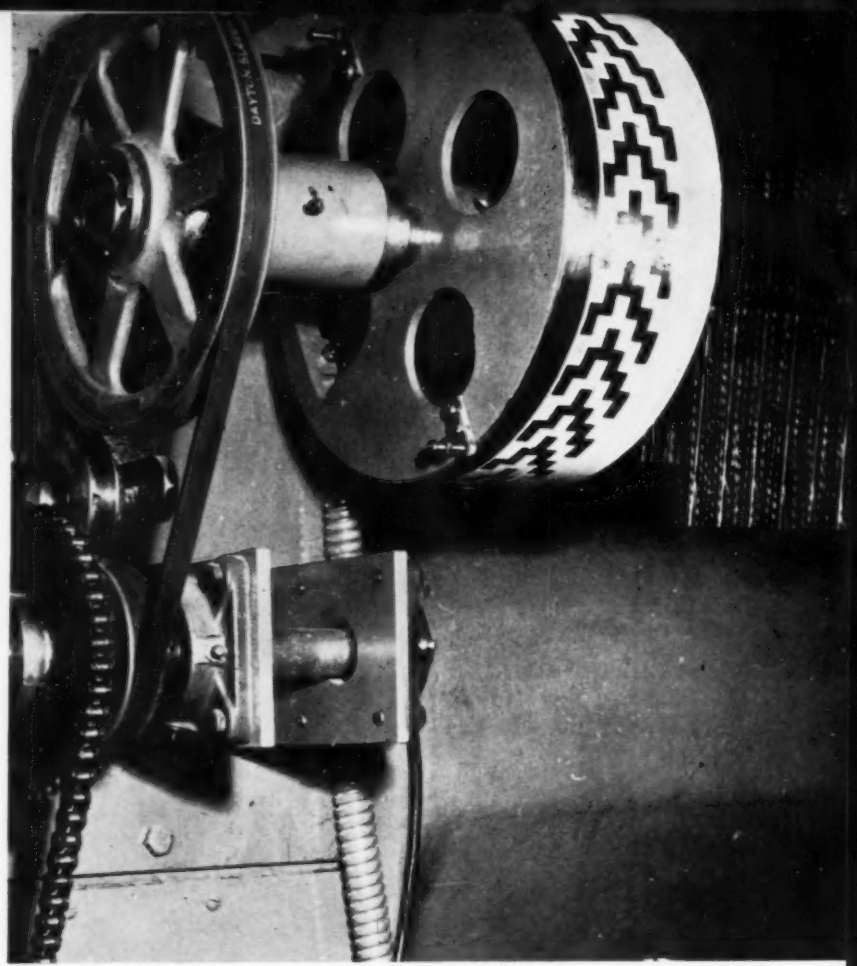
An enlarged view of one of the scrims in use is at the bottom of the opposite page. A similar enlargement of the scrim peeled away from the carpet back is shown below.



CALL THE PLAYS ELECTRICALLY

The electron lends its magic to tufting pattern control

by J. O. Erwin
and Wallace Hammel, Jr.
Cobble Bros. Machinery Co.



One type of pattern drum is a steel shell onto which is taped the pattern to be tufted.

THE incorporation of electrical control components into the pattern devices of tufting machines is a logical way of answering in part the increasing demands of versatility in those machines. The great rapidity with which tufted designs are changed requires the inherent flexibility of electrical control systems.

Some of the numerous advantages the electrical controls offer are often overlooked or misunderstood. However, this could be a natural reaction on the part of one viewing such devices for the first time, for several hundred electrical wires can be seen fanning out in all directions. On closer examination it is apparent that there is nothing complicated about the device after all; and that by designing the mechanism for electrical controls, one makes a compact, flexible unit out of what could easily be a bulky and less flexible piece of machinery.

The electrical systems for pattern control, as used on yardage-type tufting machines, can be placed in two categories: The first and simplest of the two incorporates a pattern scanning device and solenoid; the second system incorporates a pattern scanning device, a mercury wetted relay, a transistor, two condensers, and two electro-magnetic clutches. Both systems use pattern drums.

The simplicity of the first of these systems can best be explained by outlining the operation of the Universal Type Pattern Attachment, upon which it was first installed, and the Controlled Needle Machine.

The attachment consists of a pair of yarn feed rolls between which the yarn is threaded. These rolls are striped with alternating rings of friction surface and smooth surface (each ring is 3/16″ wide), and are driven at different speeds with an approximate 2 to 1 speed differential.

The rings on the two rolls do not match. Instead the friction rings on the front roll coincide with the smooth rings on the rear roll, and vice versa.

Immediately above the rolls is a series of yarn guide fingers, each of which accommodates two ends of yarn leading to two adjacent needles. Each finger is under solenoid control, and it normally aligns the two ends of yarn with the friction ring on the slow speed roll, allowing them to be driven by this roll and to slip on the smooth portion of the high speed roll to produce low nap.

When the pattern calls for it, the solenoid controlling the yarn guide finger is energized, switching the finger laterally to align the two ends of yarn with the friction ring on the high speed roll, thus changing the feed rate of the yarn, and causing the machine to produce high nap.

The latest application of this solenoid-controlled patterning system has been incorporated in the Controlled Needle Machine to produce patterns in cut pile. All of the tufting on this machine is done in

The six rolls of this tufting machine, directed by the drum on opposite page, vary yarn tensions to form texture of carpet face.

straight lines, as in other yardage type machines, and the designs are effected (dictated by the pattern drum) by taking certain needles out of operation.

The needles are normally locked in a tufting position in the needle bar which reciprocates vertically as usual. The needle holders are locked to it by means of a latch pin which is urged into engagement by a light spring.

Individual solenoids control the respective latch pins, and when energized, retract the latch pin from the needle holder, allowing its associated needle to remain in the "up" position while the rest of the needles continue their tufting operation. While this needle is in the "up" or released position, the needles do not penetrate the cloth at all, and that portion of the sheeting which passes under the needle while it is disengaged is left completely bare.

The solenoids are controlled by a drum into the surface of which the pattern is cut in the form of annular milled grooves, one for each solenoid control finger. The length of each groove represents the distance each needle skips. When a finger drops into a groove, it closes an electrical circuit and energizes the solenoid which allows the needle to remain in the up or released position. When a finger rides up out of the groove, it breaks the circuit and the needle returns to the tufting position.

The pattern drum for the Universal Type Pattern Attachment is of the same design, the difference being in the ultimate use of the solenoid. However, just as before, when a finger drops into a groove, it closes an electrical circuit, and switches its respective yarn guide finger into the high nap position. When it rides up out of the groove, it breaks the circuit and returns the yarn guide finger to the position to make low nap.

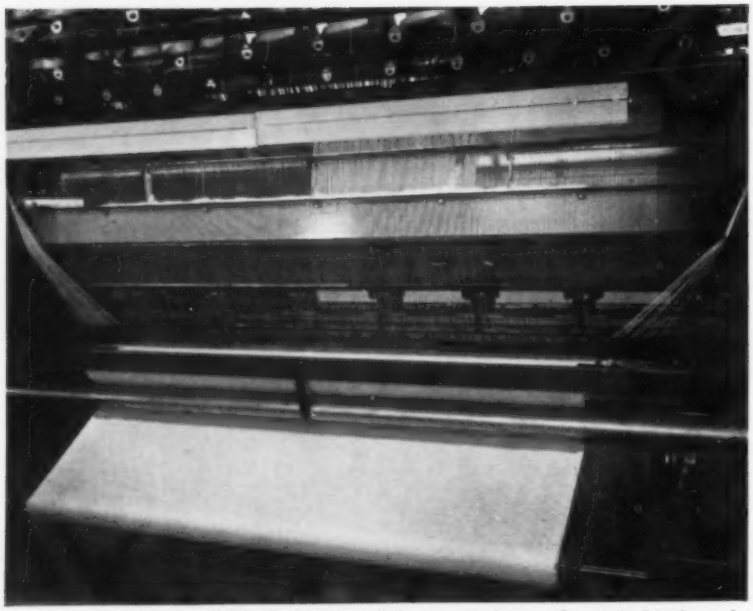
The advantages of both of these pattern control systems lie in the fact that very few parts are used, which reduces maintenance or parts stocking.

Each needle holder or yarn guide finger is controlled by one scanning finger and a solenoid, and these two components are repeated over the entire tufting width. By use of a pattern drum, patterns can be changed in a matter of minutes without rethreading the machine.

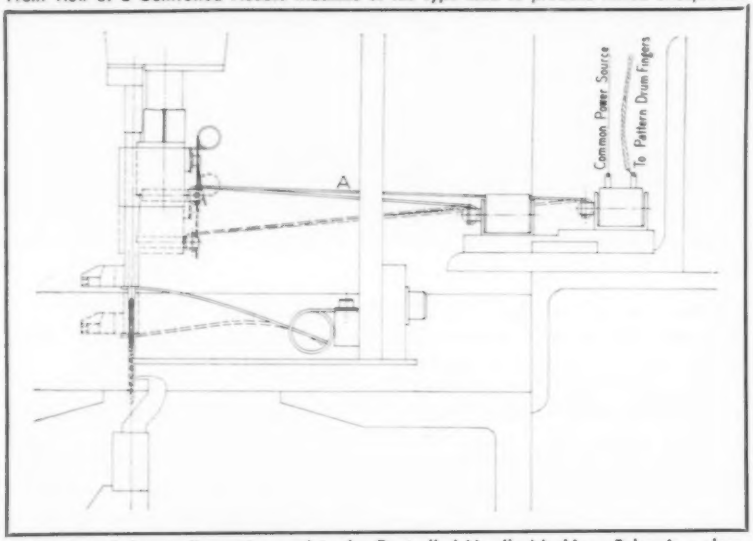
Unlimited designs are possible with both machines, and in the case of the Universal Type Pattern Attachment, designs are made in high and low loop pile, which has enjoyed good market success both in broadloom and scatterrugs.

With the Universal Type Pattern Attachment, patterns can be made up to the full machine width; and when small rugs are to be run, multiple patterns are cut on the drums to allow the production of multiple widths of throw rugs.

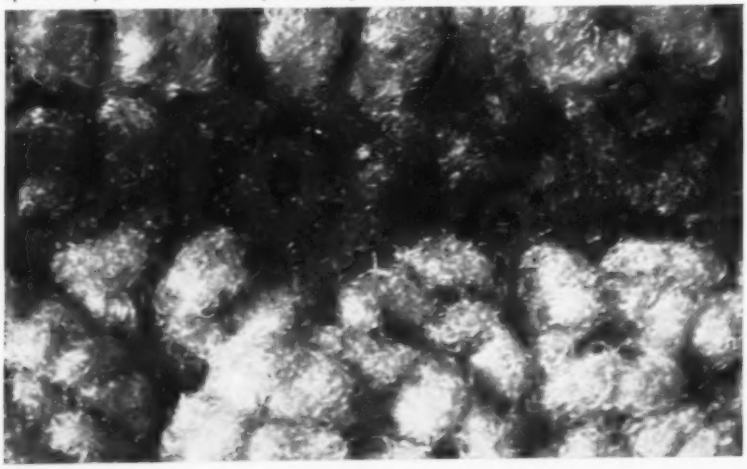
With the Controlled Needle Machine, costly overlaying operations can be eliminated and all rug or bedspread sewing, except fringing, done in one operation. Pat-



Front view of a Controlled Needle Machine of the type used to produce tufted bedspreads.



A drawing of the needle motion used in the Controlled Needle Machines. Below is a close-up of the pile in a two-color (dark background) rug tufted in two passes on this system.



THE TITLE PAGE FOR THIS SECTION is the reproduction of a carpet made on a Cobble Bros. tufting machine which is not yet commercially available. The letters are formed by leaving a background of low loop pile outlined by higher cut pile.

terns ranging from the simplest to the most intricate can be made by leaving out selected areas of tufts.

When this is used for making throw rugs, two-color rugs can be run. This is accomplished by first tufting in a background in very low cut pile. Then by running this previously tufted background through the Controlled Needle Machine, which may be threaded with a contrasting yarn, the design will appear in the bare areas.

The second type of electrical control system is a little more complex. However it is very simple to operate. It can be best described by outlining the operation of the Single End Scroll Type Pattern Attachment.

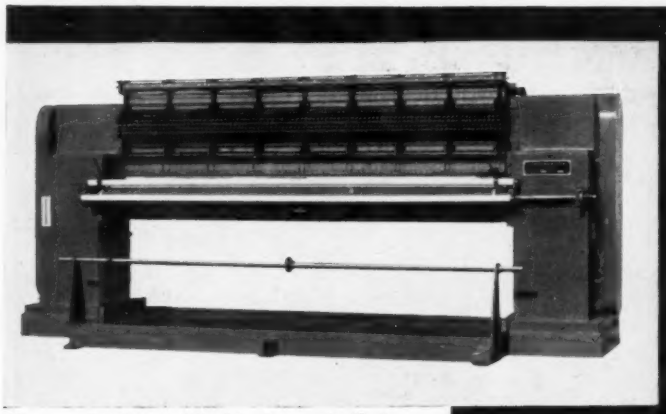
This attachment consists of a series of yarn feed rolls driven at two different speeds by two electro-magnetic clutches mounted on the same shaft and running at an approximate 2 to 1 speed differential. The speed of each roll is selectively controlled by a pattern drum which carries the pattern on a shell. This shell is very easy to change, and the different patterns are electrically transmitted from the shell by one of three different pattern scanning devices.

In operation, the attachment is normally supplied with the yarn feed rolls running at the slow speed or low pile height, which means that the slow speed clutch is engaged. When the pattern calls for it, the speed of each roll, individually or collectively, is increased by switching the selection of drive clutches to the fast running clutch, thereby speeding up the roll and delivering more yarn to the needle to produce high nap.

The electrical control system has been broken down into modular units, thereby allowing easy servicing should the need arise. Each yarn feed roll unit is controlled by one plug-in unit in the electrical system. The components in the plug-in unit consist of silicon rectifiers for both the 90-volt clutch circuit and the 20-volt relay circuit, a power transistor, and a

(Continued on page 124)

HERE'S THE SOMCO WAY* TO MORE TUFTED PROFITS:



Above: Southern Machine's **controlled** needle Tufting Machine from the front.

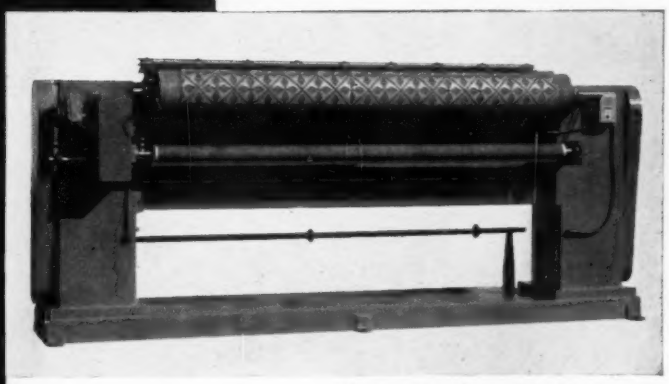
*The SOMCO Way to more profits is to increase production, improve quality and lower manufacturing costs.

This is made possible by Southern Machine's *controlled* needle Tufting Machine, shown here in front and rear views.

Unlimited patterns can be run with results like the spread pictured below . . . now here's a product with sales appeal tufted right into it!

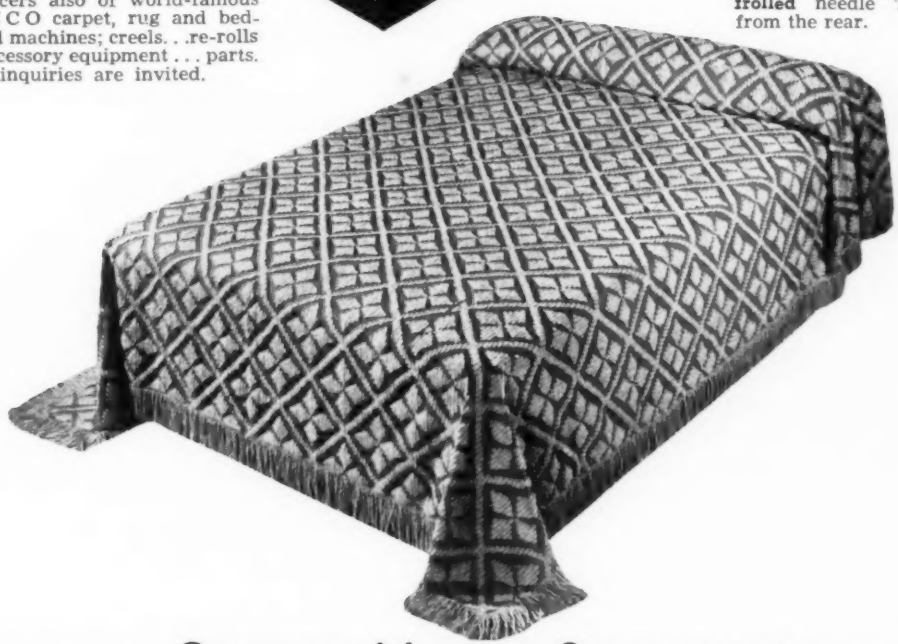
in tufting

No Substitute Can Do What a Southern Machine Does!



Above: Southern Machine's **controlled** needle Tufting Machine from the rear.

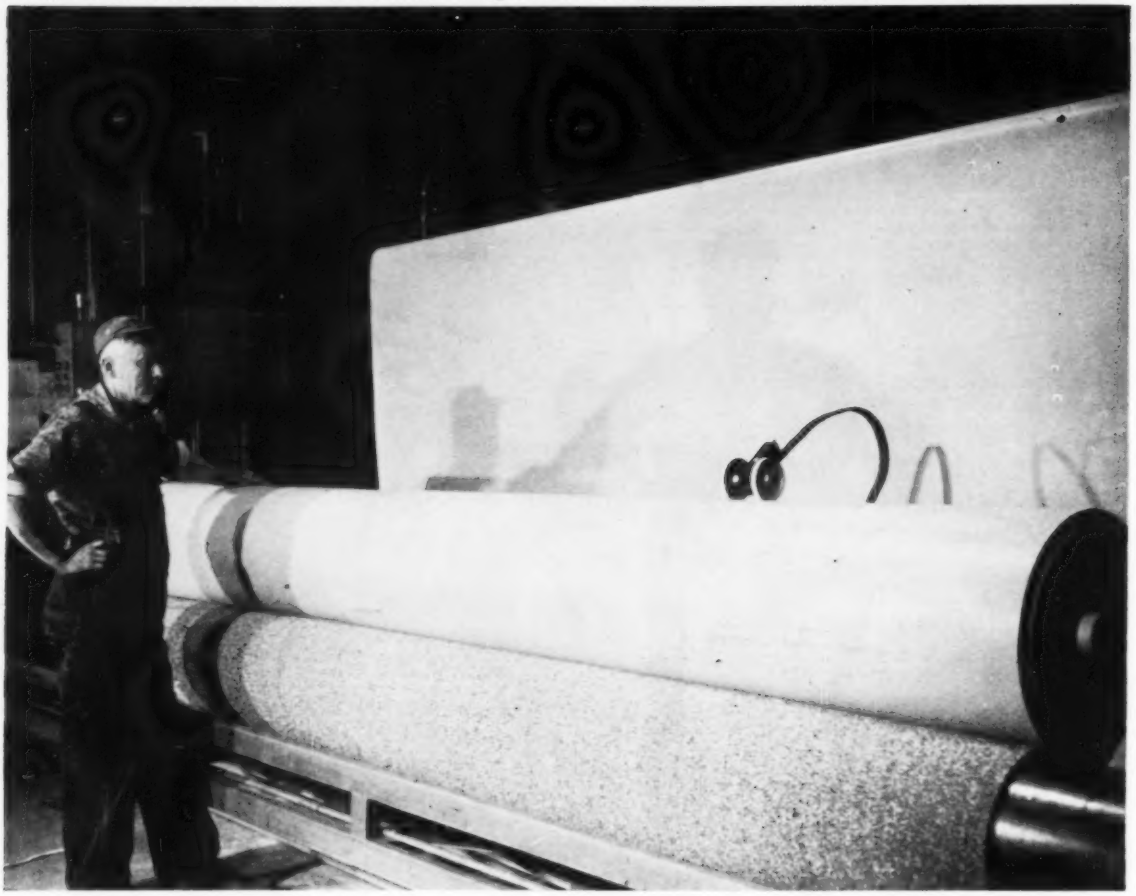
Producers also of world-famous SOMCO carpet, rug and bedspread machines; creels. . .re-rolls . . . accessory equipment . . . parts. Your inquiries are invited.



2320 Holtzclaw Ave. **SOUTHERN MACHINE COMPANY, INC.** Chattanooga, Tenn.

Telephone — MAdison 4-3329

A layer of foam rubber vulcanized to the latex backing forms built-in padding for this carpeting. The rubber remains resilient.



Carpet with a bounce

A carpet firm prepares foam rubber padding in sheets or vulcanized to the floor covering

Staff prepared

Exclusive

THE do-it-yourself fan, or the home owner in a region suffering a scarcity of carpet layers, may rejoice to know that he can buy tufted carpet with foam-rubber padding vulcanized right to the carpet's latex coating. The firm of Dalton Carpet Coating Co., Inc., Dalton, Ga., also produces the foam rubber padding, secured to a jute backing, to be used as a padding under existing carpets. The cost of the new combination is less than the conventional carpet-and-hair-pad combination.

Produced in any reasonable length, in widths up to 15′, and in a nominal thickness of 5/16″, the padding, whether vulcanized to the carpets or installed separately, gives the required resilience and recovery demanded in normal usage—recovery is something like 180% of the customary. When vulcanized to the carpet, the foam does not outgrow the carpet and require trimming; nor does it crawl from under the cover.

The economics revolve about two or three main factors, one of which is the foams' lack of weight. The material weighs only ¼ to ½ as much as do the conventional materials.

The foam quality is something on which little "dodging" can be

Do you know the "yes" and "no" score on *Lurex®-with-Mylar*?*

	Yes	No
Is Mylar itself a metallic yarn?	☐	✓

Mylar in itself is *not* a metallic yarn. It is a clear polyester film made by DuPont. When combined with Lurex it then becomes a metallic yarn known as Lurex-with-Mylar.

Is Lurex-with-Mylar softer and more supple?	✓	☐

Dobeckmun has long experience in creating metallic yarns that are superbly soft and supple. Lurex itself is exceptionally soft and Lurex-with-Mylar is an outstanding development in this field.

Does Lurex-with-Mylar clean and launder well?	✓	☐

Lurex-with-Mylar may be cleaned or laundered successfully according to the fiber with which it is woven. In itself, Lurex-with-Mylar is completely dry cleanable and commercially launderable. As certified by the American Institute of Laundering.

Has Lurex-with-Mylar greater brilliance?	✓	☐

The non-tarnishing brilliance of Lurex is universally recognized. Now this high degree of brilliance is even further increased through the combination of crystal-clear Mylar with Lurex.

Lurex-with-Mylar offers maximum strength with delicacy?	✓	☐

The strength of Lurex is remarkable, especially in view of its delicacy. In Lurex-with-Mylar the delicacy is maintained and the strength is greatly increased.

Lurex-with-Mylar has outstanding heat resistance?	✓	☐

Mylar, used in combination with Lurex, permits the application of standard wet processing procedures with successful results . . . provides heat, abrasion and chemical resistance.

Has Lurex-with-Mylar greater design versatility?	✓	☐

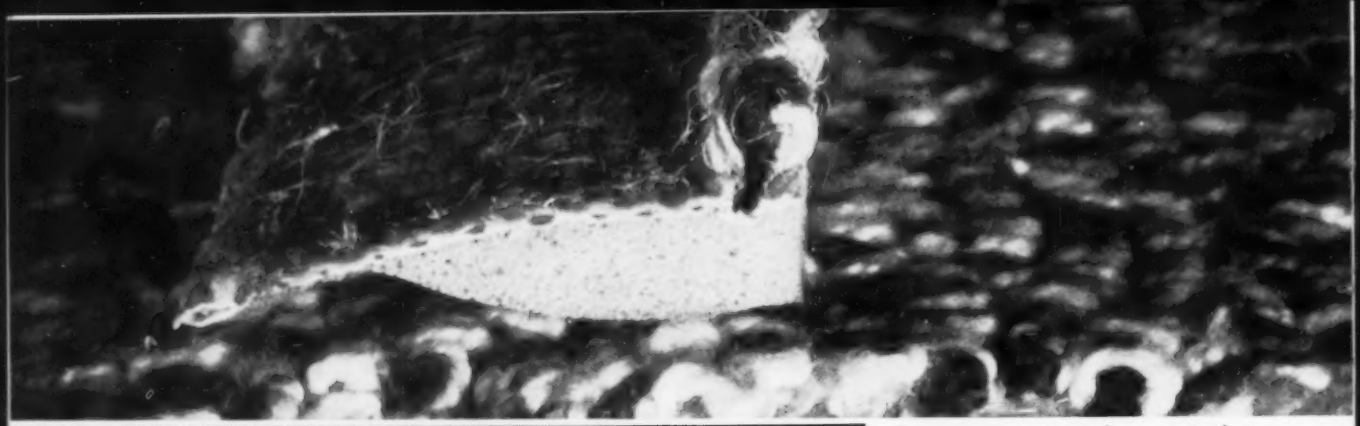
The unique combination of properties in Lurex-with-Mylar plus the tremendous color range of Lurex itself offers exceptional scope for design.

Lurex-with-Mylar gives you the advantage of the name your customers know, the name that is backed by consistent national advertising and strong local promotion.

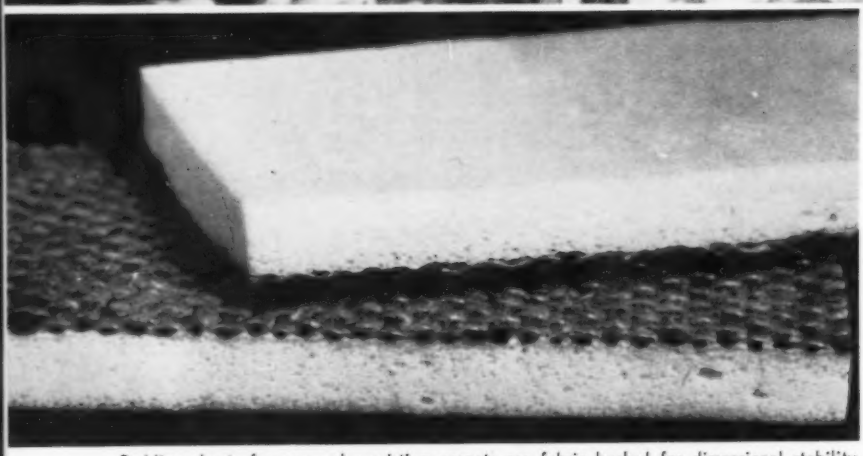
The Dobeckmun Company, A Division of The Dow Chemical Company, Cleveland • New York • London • Amsterdam

Atlanta • Berkeley, Calif. • Boston • Philadelphia • Charlotte, N. C. • Chicago • Detroit
Manufacturing Affiliates in Canada: William B. Stewart & Sons Ltd., Toronto and Montreal

*T. M. du Pont

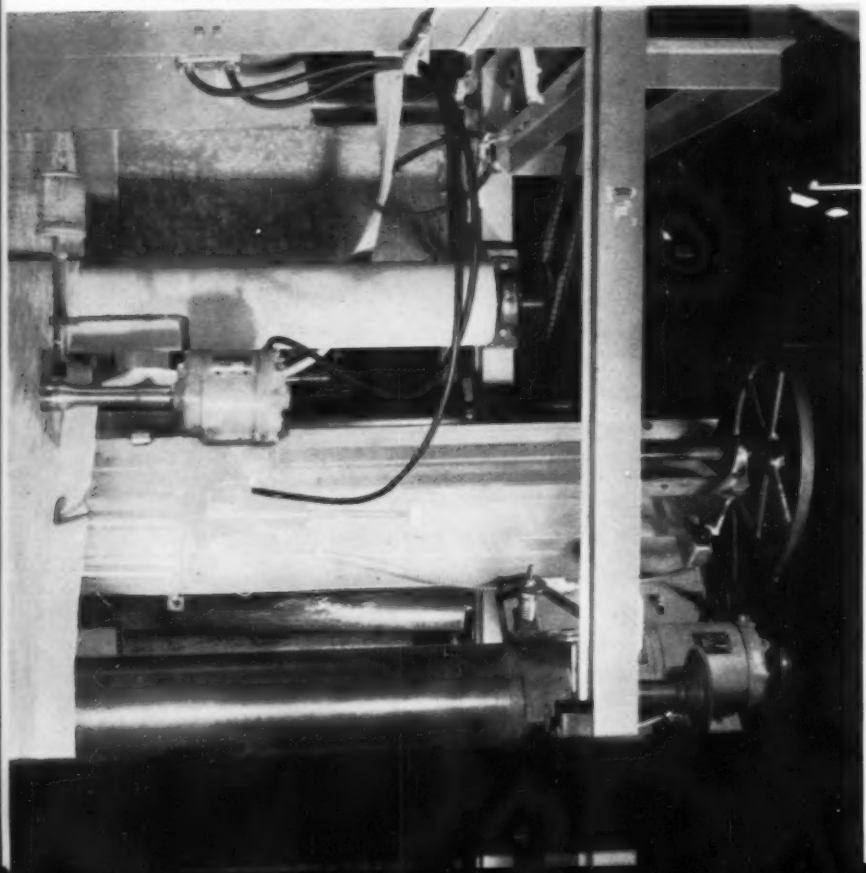


To assure even seams when carpet edges are joined, the rubber is applied in a uniform layer across the entire carpet width and into the waste areas at the selvages. Note selvage trimming above.



Padding sheets for use under existing carpets are fabric backed for dimensional stability.

The Gowin trimmer is used to cut away the selvage waste along a given course of pile yarns.



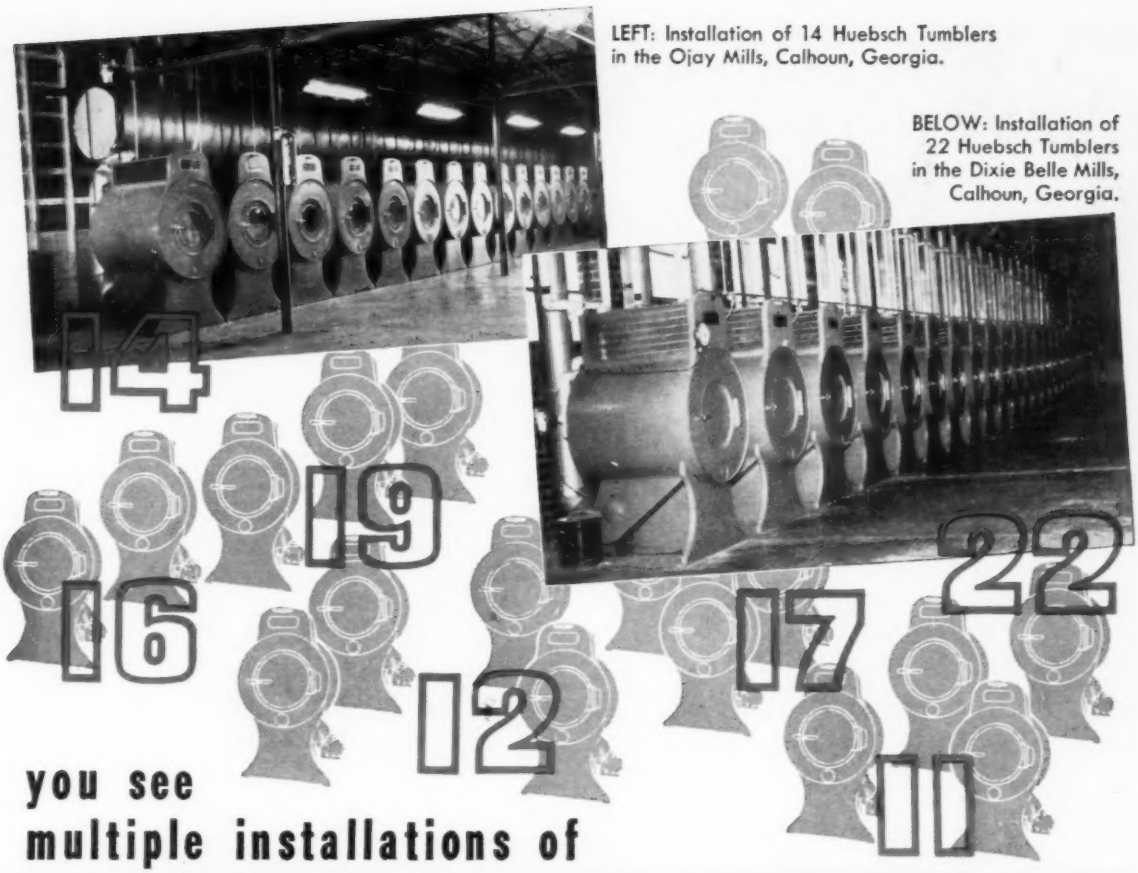
practiced. At best the material is somewhat unpredictable to formulate and apply, even when the operators keep the cook book open to the correct page; and to take liberties with standard procedures or ingredients is to invite immediate trouble.

Sometimes the compound will be behaving beautifully (mixing readily, foaming properly at the point of application, and staying fluffy in the heated drying chambers) only to become suddenly temperamental and collapse like deflated yeast bread—vulcanized forever to an expensive carpet, too. No one invites such.

The rubber is formulated to give high aging properties in the finished foam, good adhesion, and lack of offensive odors. Normally it is prepared from natural latex, some synthetic latexes (no reclaimed rubber is used), and fillers.

Everything associated with its application is critical. The ingredients must be mixed carefully, withstand the trip through the foaming machine and emerge with the correct consistency, and survive a timed trip through the drying ovens which operate with little variation in temperature. The ingredients are water-soluble, and are not dangerous to handle. Naturally the spongy rubber required that carpet dyeing be carried out prior to the foam application.

The rubber (incidentally, it is prepared in white, gray, and buff) will not separate from the carpet and can be cleaned with the same agents used on latexed carpets.



LEFT: Installation of 14 Huebsch Tumblers in the Ojay Mills, Calhoun, Georgia.

BELOW: Installation of 22 Huebsch Tumblers in the Dixie Belle Mills, Calhoun, Georgia.

you see multiple installations of

HUEBSCH TUMBLERS

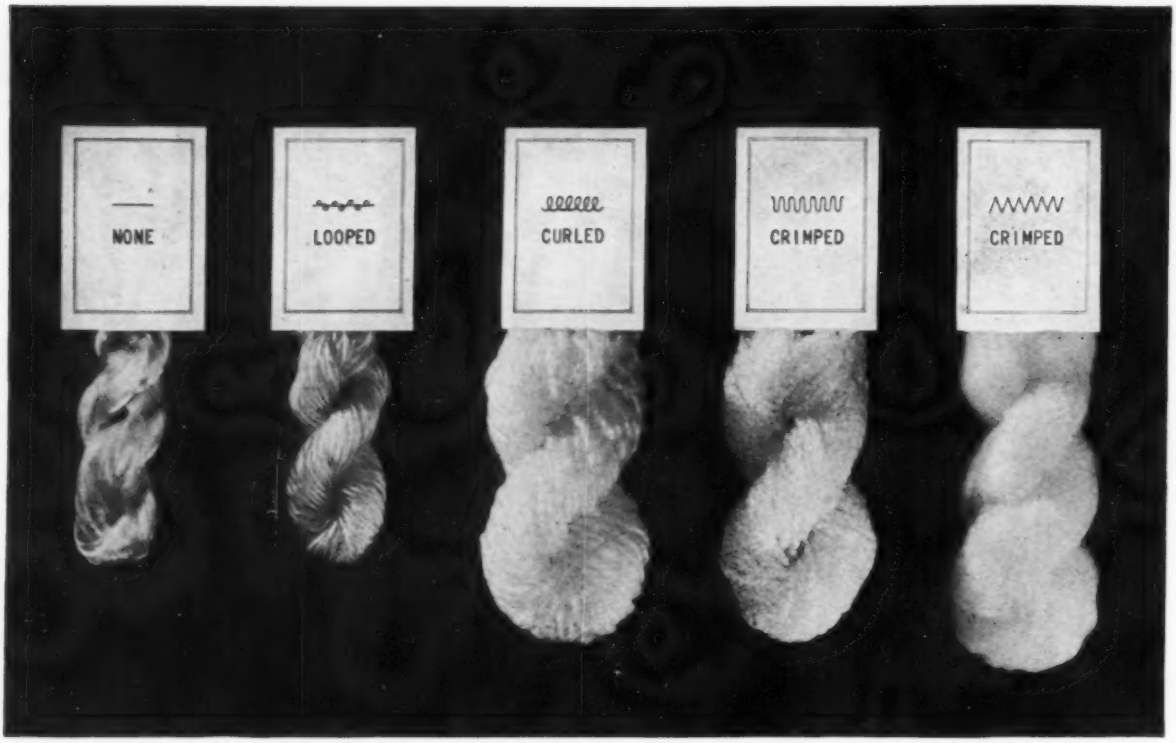
all over the Tufted Textile Industry

because they

DRY FASTER at LESS COST

Big installations of Huebsch Open-End Tumblers, in the big 42″ size, are a common sight in the tufted textile industry. It is fast and efficient... yet the original price is low and operating costs are economical. *Find out for yourself!* Write for information on the Huebsch "42"... made by the world's largest manufacturer of commercial drying tumblers.

HUEBSCH ORIGINATORS, **3775 N. Holton St., Milwaukee 1, Wis.**



60 yards of Caprolan 2100-112-0-0-HB heavy yarn which has not been texturized.

Same weight, same yarn texturized by looping.

Same weight, same yarn texturized by curling.

Same weight, same yarn crimped by one process.

Same weight, same yarn crimped by second method.

Texturized filament nylon?... What a Difference *caprolan** Makes!

Take a Look at How Caprolan Responds to Four Popular Bulking Processes!

The left-hand skein is simply 60 yards of our 2100-112-0-0-HB heavy yarn which *has not* been texturized by *any* method. To its right are four skeins of the same weight of the same yarn bulked by looping, curling and two methods of crimping.

These texturized yarns of Caprolan tell their own story!

If you are a producer of carpets, upholstery fabrics, decorative textiles, industrial fabrics or military goods, texturized filament yarns of Caprolan open a whole new world of fabric engineering and design opportunities for you. Used alone, or in combination with each other, texturized yarns should hold a high priority in your future fabric plans.

When ordering texturized filament nylon yarns, specify Caprolan, which has all the advantages of nylon plus a number of extra, important performance values!

All texturized skeins have the same number of winds and the same amount of relaxation. For further information, technical assistance or list of sources, write us today.

*caprolan** ... *the performance fiber ... by Allied Chemical*

Allied Chemical

Fiber Sales and Service *National Aniline Division*

261 Madison Avenue, New York City 16, N. Y.

*Registered Trade Mark for Allied Chemical's Polyamide Fiber.

TO MAKE TUFTED RUGS AND BEDSPREADS MORE EXCITING, MORE PROFITABLE...THERE'S NOTHING LIKE

METLON®
with MYLAR*

the soft-touch metallic yarn

METLON-*with-Mylar* IS SOFT YET STRONG...
soft and supple enough to blend with the finest natural and synthetic fibers, strong enough to resist breakage on high-speed equipment in either warp or weft.

METLON-*with-Mylar* ADAPTS TO ALL MILL PROCESSES...
accepts vat-dyeing and yarn-dyeing, resists carbonizing, vulcanizing and mercerizing.

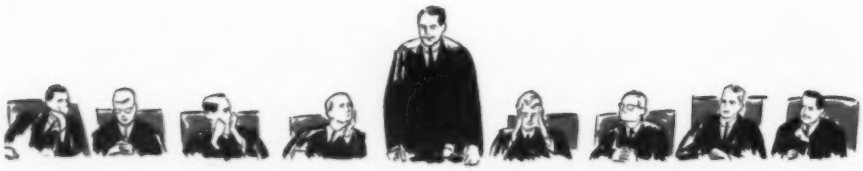
METLON-*with-Mylar* IS GUARANTEED WASHABLE, DRY-CLEANABLE...
the first metallic yarn to be Certified Washable by the American Institute of Laundering! Sun, salt water and salt air won't destroy its brilliance.

WRITE OR PHONE FOR EXPERT ASSISTANCE
in developing Metlon-with-Mylar yarns for your tufting equipment.

METLON CORPORATION
432 Fourth Avenue, New York 16, N. Y.
A Subsidiary of Acme Backing Corporation

METLON SPINS A BETTER YARN!

*DuPont's Polyester Film



In law it's the Supreme Court...

In colored yarns it's Franklin-Dyed

Yes, with nearly half a century of experience, 4 plants, hundreds of dyeing machines in dozens of sizes, winding equipment to match and complete laboratory facilities, we are widely recognized as the ultimate authority on dyeing all types of spun yarns.

And here are other advantages which make us your logical source for yarn dyeing service:

SPECIALISTS

Yarn dyeing is our specialty. We don't dye just to make yarn sales. Our sole objective is to provide the best yarn dyeing service available.

QUALITY

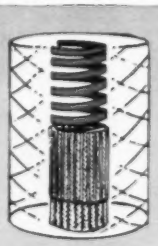
We dye yarns exclusively on the Franklin compressible spring. This permits uniform density of packages, which promotes uniform penetration of the dye liquor and uniform shades.

CONSULTANTS

We can help you with your color problems. Our laboratory facilities, highly skilled technicians and unmatched experience in time, variety and volume are at your service.

CONVENIENCE

Our 4 yarn dyeing plants, in 4 different textile centers, are conveniently yours. Get in touch with our nearest plant or office.



X-ray view of Franklin Package, the "secret" of uniform shades. Don't say "package dyed". Say "Franklin-Dyed".

Franklin Process

A DIVISION OF INDIAN HEAD MILLS

Dyers of cotton (carded, combed, mercerized) Orlon* (yarn & tow) Acrilan • Dacron** • Ban-Lon® • Helanca • Spun Nylon • Spun Rayon • Blends • Wool and Worsted yarn

Philadelphia • Greenville
Chattanooga • Fingerville, S. C.
Sales Representatives in Providence, R. I.
New York Office (1407 Broadway)

7-8

*Trademark for Dupont's acrylic fibre **Trademark for Dupont's polyester fibre

Why not print your tufted carpets?

by P. Abbenheim
Exclusive

EVER SINCE several British tufted carpet manufacturers produced printed designs that penetrated to the bottom of the pile and were very well defined, the trade has been rooting about to try to find out how it is done. A hint of one possible method is revealed in a technique depending on the use of new dyestuffs and outlined by Imperial Chemical Industries Ltd., of England (U. S. subsidiary: Arnold, Hoffman & Co., Inc.).

The new dyestuffs used in the process are the recently discovered Procions, which now number eighteen with a promise of more to come. The Procions are distinctive in that they react chemically with cellulosic fibers, thus insuring a high degree of fixation. They can, in many instances, be dyed cold and printed without requiring a high degree of fixation temperatures.

Until this time, bleeding of the printed pattern has been a serious problem with rayon carpets printed with, say, direct, vat, solubilized vat, and azoic dyes—as the material is hydrophylic and allows color migration, particularly when the dye is being steamed to fix it. Another unpleasant aspect is that marking off has resulted when unfixed dye and thickener have been washed off after steaming.

In an effort to overcome this, some printers have tried to use the oil-in-water pigment prints, but here the finished carpet, although not steamed or washed off, has been quite unsatisfactory because of the unpleasant harshness in the pigmented areas of the pattern.

With the newly discovered cold fixing Procions it is possible to print a good pattern sharply and without danger of the color bleeding into the ground.

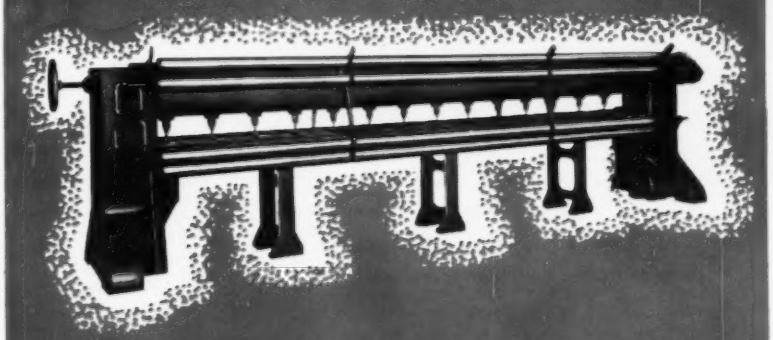
Fixing of the printed carpet can be done at very low temperatures, and the Procions will give a high color value in bright self-color or mixture shades. Fastness to light, wet treatment, and rubbing is now a recognized feature of the printed tufted rayon carpet patterned with these new dyes.

Fixation of the fiber reactive dye to the cellulose is effected either by allowing the dye to remain in contact with the fiber for some hours at low temperatures, or by a short steaming treatment.

When printing is complete and

(Continued on page 120)

TEN-TEX
TUFTING MACHINES



The Standard of the Industry Throughout the World!

IN USE

U. S. A.	CANADA	IRAN	ECUADOR
MEXICO	ARGENTINA	WEST GERMANY	RHODESIA
COLUMBIA	BRAZIL	HOLLAND	INDIA
CUBA	ICELAND	BELGIUM	PHILIPPINES
JAMAICA	UNITED KINGDOM	FRANCE	JAPAN
GUATEMALA	IRELAND	ITALY	HONGKONG
VENEZUELA	NORWAY	SWITZERLAND	PAKISTAN
PERU	SWEDEN	AUSTRIA	PUERTO RICO IX
CHILE	FINLAND	GREECE	AUSTRALIA
URUGUAY	DENMARK	UNION S. AFRICA	NEW ZEALAND
SPAIN	LEBANON	PORTUGAL	SYRIA

TABLE MODEL TUFTING MACHINES
Single Needle to 72 Needles

YARDAGE TUFTING MACHINES
30" to 216" in Width

Write for Complete Details

TEN-TEX CORPORATION
1207 EAST 23RD STREET, CHATTANOOGA, TENN., U. S. A.
TEN-TEX MACHINES (EUROPE) LTD., GRAFTON STREET, LEEDS 7, ENGLAND
Cable Address: TENTEX

For further information use Handy Return Card, Page 209

Complementing Engineering Services on

TUFTED CARPETING

Two complementing, widely-experienced staffs of textile engineers are at your service . . . engineers *specializing* in the broad field of drying, curing and conditioning fabrics as well as in process and comfort heating, ventilating, and air conditioning and other operations noted at the right.

To the problems of maintaining color, tone and width integrity in the processing of tufted fabrics, A&G and Ross Engineers bring sound engineering backgrounds and wide knowledge of air movements, heat control, zoning, behavior of fabrics during latexing, drying, curing, conditioning, and mechanical handling and other pertinent operations.

THE MIDLAND-ROSS GROUP OF COMPLEMENTING SERVICES

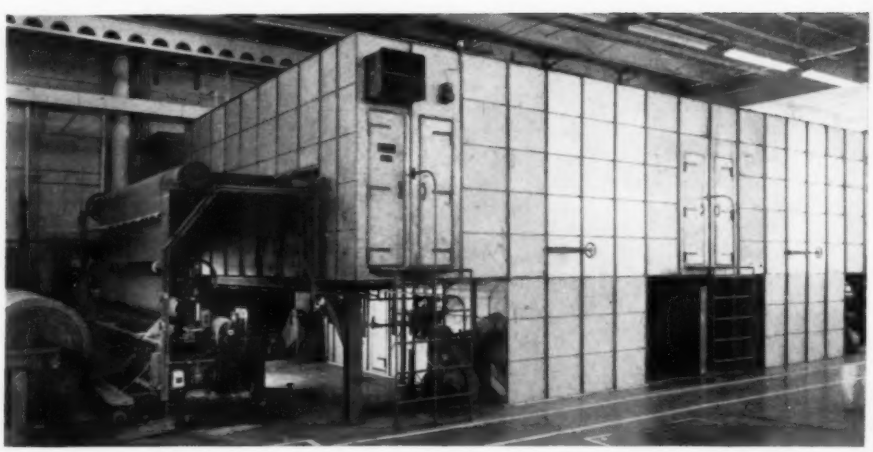
J. O. Ross Engineering, New York
John Hopkins Corporation, New Brunswick, N. J.
Andrews and Goodrich, Boston
Ross Engineering of Canada Limited, Montreal
Ross Midwest Fulton, Dayton
Hartig Extruders, Mountainside, N. J.
Ross Engineering Company, Ltd., England

ANDREWS and GOODRICH
A unit of J. O. Ross Engineering Division, Midland-Ross Corporation
336 ADAMS STREET, BOSTON (Dorchester), MASS.
Southern Representatives: McSpadden & Scantland, Charlotte, N. C.

J. O. ROSS ENGINEERING DIVISION
Midland-Ross Corporation
444 MADISON AVENUE, NEW YORK 22, N. Y.
Atlanta Office: 3120 Maple, N.E., Atlanta 5, Ga.
ATLANTA • BOSTON • CHICAGO • DETROIT • LOS ANGELES • SEATTLE

ROSS Air Systems

A&G — PRODUCTIVE CAPACITY · THERMAL EFFICIENCY · QUALITY FINISH



Driven roll method of conveying carpeting through dryer in relaxed conditions.

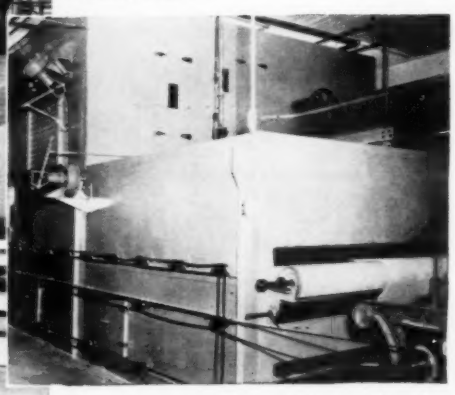
The Broad Service of

ANDREWS & GOODRICH and ROSS ENGINEERS

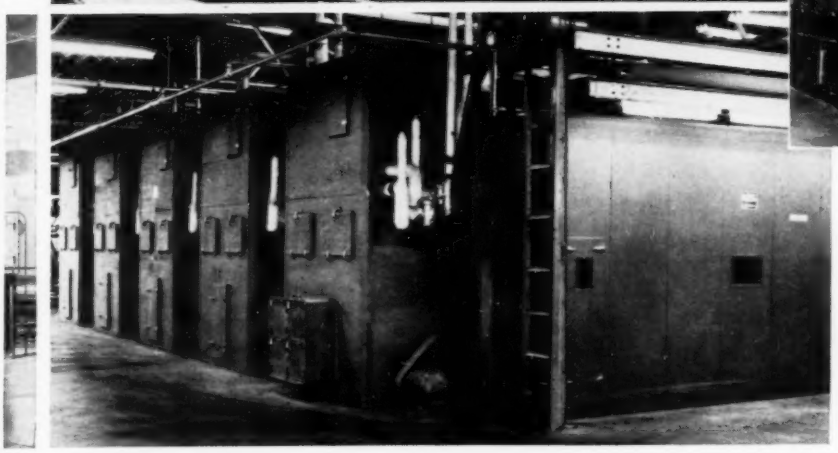
includes the design and construction of the following equipment and systems:

- *Tenter Dryers*
- *Predryers*
- *Dye Range Dryers*
- *Skein Dryers*
- *Loop Dryers*
- *Warp Dryers*
- *Stock Dryers*
- *Resin Curing Units*
- *Cloth Conditioner*
- *Carpet Dryers*
- *Heating & Ventilating*
- *Evaporation Cooling Systems*
- *Vapor Absorption & Exhaust*
- *Waste Heat Recovery*
- *Cycle Conditioning*
- *Web Conditioning*
- *Comfort Ventilating & Cooling*
- *Dust Control and Recovery*
- *Constant Temperature & Humidity*

Tenter conveying systems within dryer housing; width-controlled.



Latex drying and curing oven.



Discharge end of a 15 foot Loop Dryer.

BEST WORKER IN ANY TUFTED TEXTILE OPERATION

GET THE FACTS FROM PAUL GURLEY OR CHUCK CHRISTIANSEN THE NEXT TIME THEY STOP BY YOUR PLACE!

PIEDMONT
COTTON MILLS

EAST POINT, GA. PHONE: ATLANTA, FO. 1-3151
DALTON, 2249

fixation has taken place, the printed carpet should be washed to remove superfluous unreacted dye. This is quite safe as a procedure, as the unreacted dye is not substantive to the cellulose.

Washing-off is a very important matter if really satisfactory fastness is required; and great effort should be made to make sure that the detergent liquor passes through the pile. A good way of making sure that washing-off is completed, is to take a small sample of the carpet and boil it in a similar liquor for about a minute. If no discoloration of the liquor results then the carpet is completed.

Due to the nature of this type of fabric a more fluid paste is required than for conventional textiles in order to promote penetration to the base of the pile. Care must be taken however, to ensure that the color does not run into the ground or spread across the backing cloth.

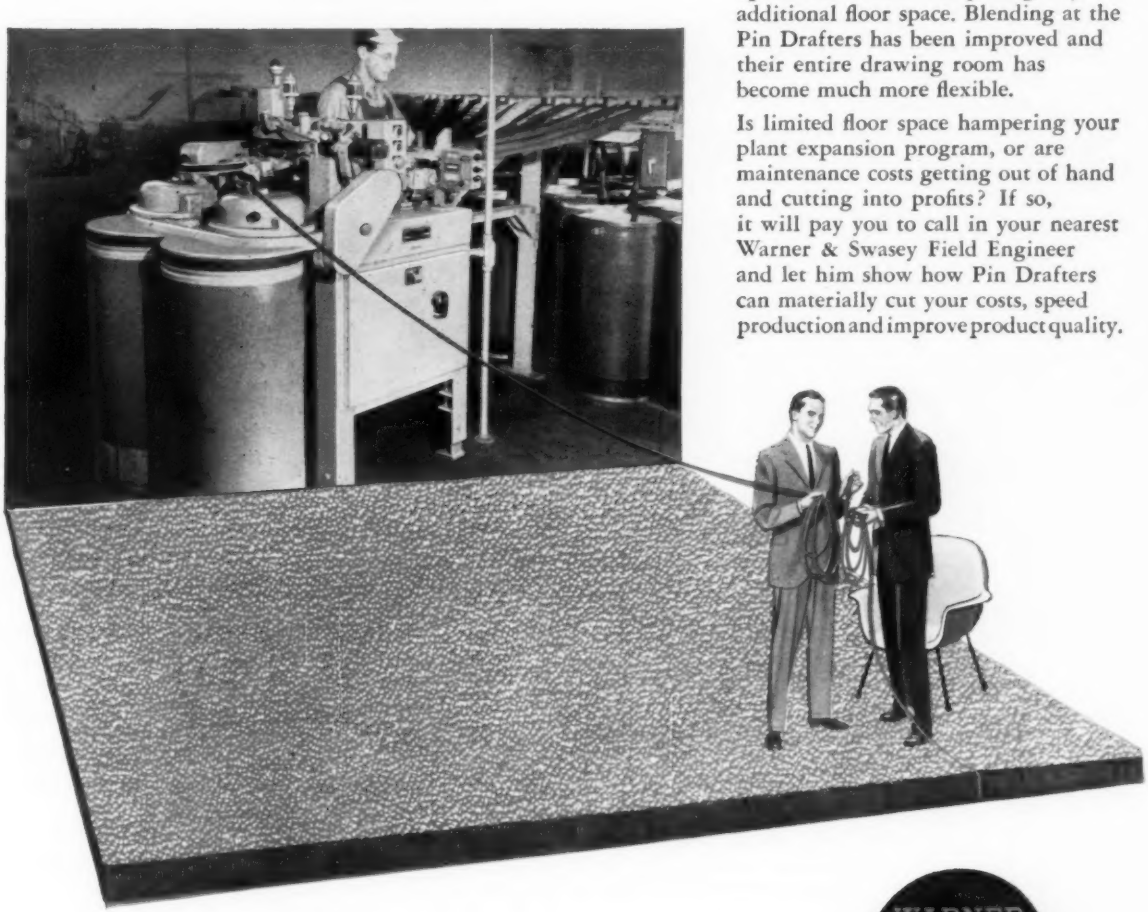
Recommended formulas for printing tufteds with the Procions include 1% sodium alginate, together with urea and sodium bicarbonate as for conventional fabric printing with Procion dyes.

Assuming that it is desired to effect fixation of the printed fabric under low temperature conditions, the sodium bicarbonate can be exchanged for the same weight of anhydrous sodium carbonate; but then the stability of the paste is cut to a few hours, and obvious precautions must be taken. The physical nature of the fabric prohibits the use of engraved rollers for applying print pastes, but screen, stencil, or spray methods should be quite satisfactory. Preliminary trials have been satisfactory using a stencil method on fabric that had neither been prewetted nor predried.

Investigational work has indicated that it is possible to dye the rug with a pale shade, then dry, then print, then soap—this soaping-off treatment being all right for both the dyed and printed goods.

This comment is quite significant, for in a report about a new printing machine for carpets, one machinery manufacturer has mentioned that he is able to print carpets very cheaply, and, of signifi-

Warner & Swasey Pin Drafters® help roll out the red carpet for Crown Cotton Mills



● Four years ago, Crown Cotton Mills of Dalton, Georgia, began the gradual installation of a modified worsted system. Today, it processes over 65,000 pounds of tufted carpet yarns each week.

At the start of their tufted yarn operation, only one dual delivery Pin Drafter was used. As demand for the yarn improved, additional Pin Drafter Intersecting Draw Frames were installed.

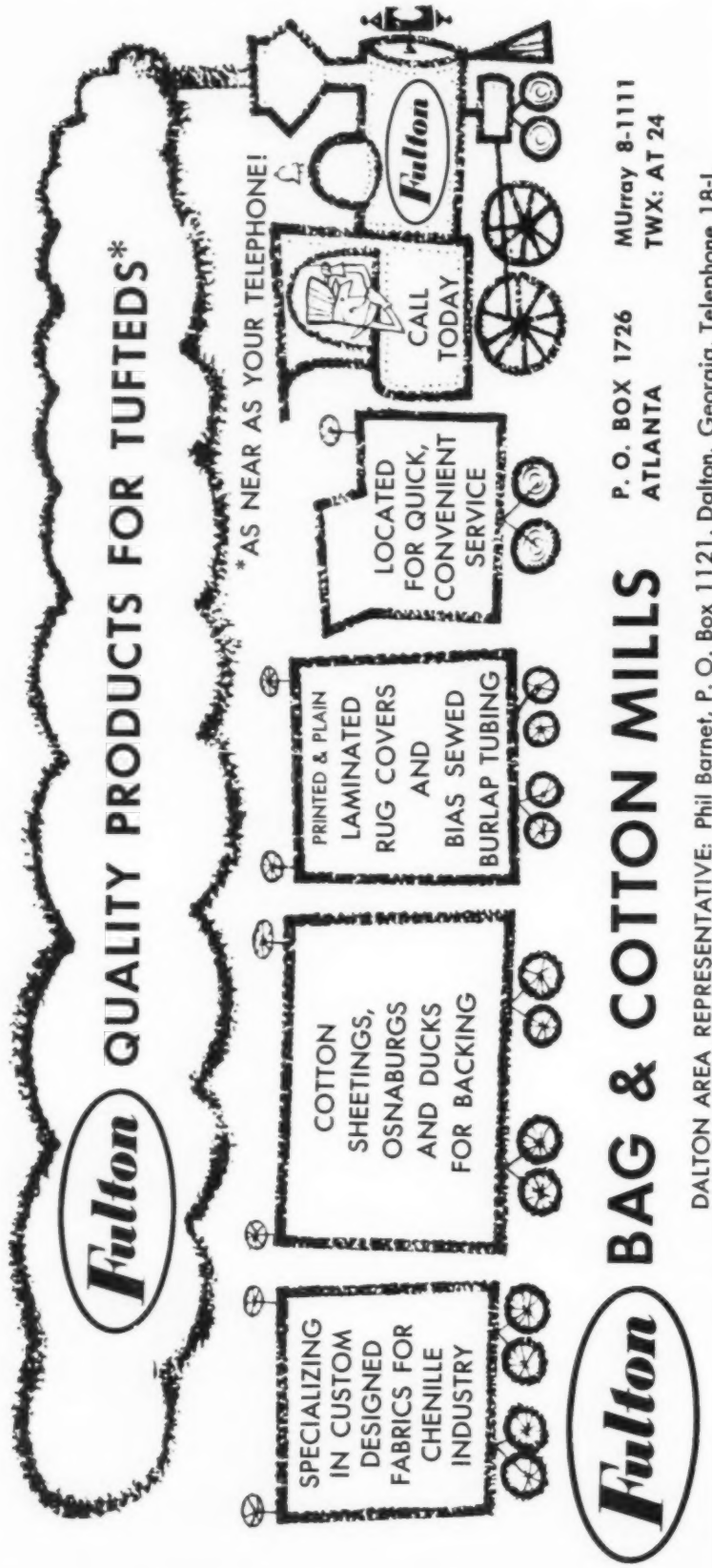
Crown's latest acquisition—two single head, high-speed dual delivery and one dual head, high-speed quad delivery units—is increasing production and providing a more balanced operation—without requiring any additional floor space. Blending at the Pin Drafters has been improved and their entire drawing room has become much more flexible.

Is limited floor space hampering your plant expansion program, or are maintenance costs getting out of hand and cutting into profits? If so, it will pay you to call in your nearest Warner & Swasey Field Engineer and let him show how Pin Drafters can materially cut your costs, speed production and improve product quality.

SALES OFFICES: Main Office and Factory: 5701 Carnegie Ave., Cleveland 3, Ohio
20 Chestnut Street, P.O. Box 215, Needham 92, Mass. • 121 11th Street, N.E., Atlanta 3, Ga.
Suburban Square Building, Ardmore (Philadelphia), Pa. • 624 Pecan Avenue, Charlotte 5, N.C.

®Reg. U.S. Pat. Off.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS...WITH A WARNER & SWASEY


Fulton
QUALITY PRODUCTS FOR TUFTEDS*
*AS NEAR AS YOUR TELEPHONE!
CALL TODAY
LOCATED FOR QUICK, CONVENIENT SERVICE
PRINTED & PLAIN LAMINATED RUG COVERS AND BIAS SEWED BURLAP TUBING
COTTON SHEETINGS, OSNABURGS AND DUCKS FOR BACKING
SPECIALIZING IN CUSTOM DESIGNED FABRICS FOR CHENILLE INDUSTRY
Fulton BAG & COTTON MILLS
P. O. BOX 1726 ATLANTA
MUrray 8-1111 TWX: AT 24
DALTON AREA REPRESENTATIVE: Phil Barnet, P. O. Box 1121, Dalton, Georgia, Telephone 18-L

cance, that it will be possible to give a design on a tinted ground. It would seem from preliminary observations that the new machine might well prove to be designed almost specifically for using the Procions, but it remains to be seen when more information is released about it, just how near the mark this is.

So far the best method of fixing Procion printed rayon pile tufted carpet in the presence of sodium bicarbonate is to allow the aging to take place at a low temperature —60 F to 140 F. Festoon drying can be used, or the carpet may even be batched up on rollers and left to dry in a heated drying chamber. With batching it is recommended that the drying period should be kept to a minimum so that there is no danger of marking-off.

A liner is recommended for batch storage. This liner will prevent marking-off, and it will also minimize lateral distortion of the print.

At 70 F optimum fixation takes place within about twenty-four hours, but if the temperature is raised to, say, 140 F, then only about one hour is required for fixation.

If sodium carbonate is used, then the fixing time can be cut. At 70 F it can be brought down to two or three hours; while at 140 F it can be cut to as little as 45 minutes. With the use of sodium carbonate comes a shorter life of the printing paste.

Very heavy print effects have been obtained with pastes containing as little as three per cent of Procion. This is attributed to the optical qualities of the pile itself.

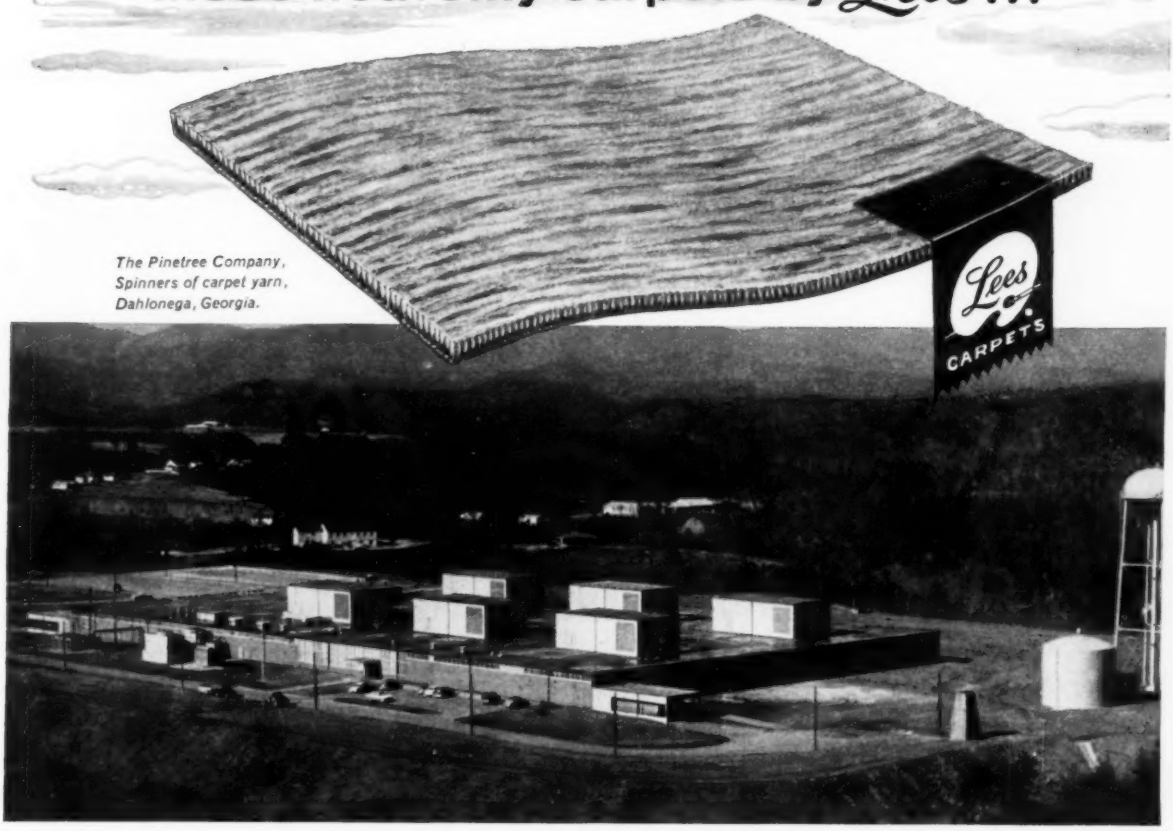
Although no Procion black has yet been made, it is possible to mix a good one using:

Procion Yellow R 0.45%
Procion Brilliant Red 2B 0.45%
Procion Blue 3G 2.1%

A range of colors can be obtained from the deepest to the palest of pastels.

It has been observed that under recommended fixation conditions the jute backing cloth is not stained, but is seen in its natural color. Thus a Procion dyed and printed carpet can conceivably be mistaken for a carpet made from colored yarns.

those heavenly carpets by *Lees*...



The Pinetree Company, Spinners of carpet yarn, Dahlonega, Georgia.

are manufactured today in the South

James Lees and Sons Company has moved its huge floorcovering production facilities to the South.

Four years ago, Lees began construction of The Pinetree Company at Dahlonega, Ga., a carpet yarn spinning plant. The plant has since been doubled in size. The company built Rabun Mills Inc., at Rabun Gap, Ga., to handle all tufting, dyeing and finishing, and a new wilton and velvet carpet plant was located at Robbinsville, N. C.

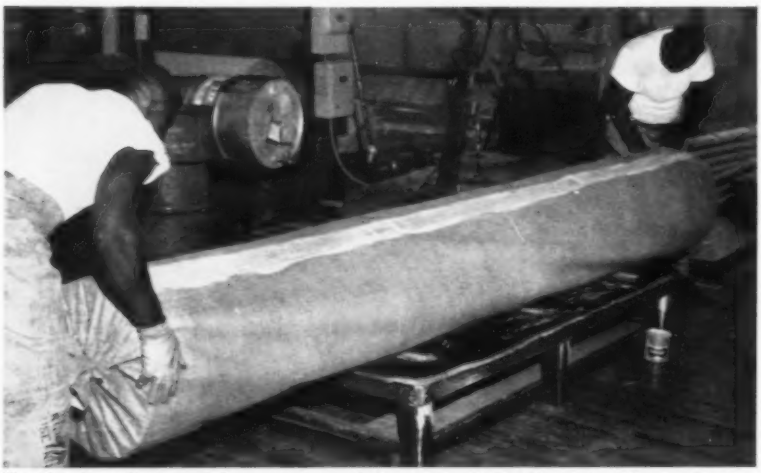
Lees is one of the many leaders in the textile industry which calls on Robert and Company Associates to design its plants and plant additions.

Because our staff is familiar with all branches of the textile industry, we are equipped to provide complete service, including site selection, preliminary sketches, cost estimates, building design, and the securing of bids from qualified contractors.

ROBERT AND COMPANY ASSOCIATES
Textile Engineering Division
ATLANTA

FOR COMPLETE CARPET PROTECTION

Just roll-wrap in Bemis Laminated Covers, the snug, non-telescoping, waterproof covers.



Then brush on the cement for a waterproof closure... and seal the ends with a quick twist.

Bemis ROL-RAP Laminated Carpet Covers give you major savings in labor, time and storage space. And the flat, cemented seams, which keep out dirt and water, are stronger (by tensile strength test) than conventional seams. Write for *complete* information.

Bemis Products for the Carpet and Textile Industry: Laminated Sheets—Laminated Yardage—Laminated Tubing—Tite-Fit Tubing—Paper Rug Covers—Burlap Piece Goods—Wire Ties and Tying Equipment.

General Offices—408 Pine Street, St. Louis 2, Mo.
Sales Offices in Principal Cities

Bemis

Electrical patterning

(from page 108)

mercury wetted contact relay.

A number of highly desirable features accompany this type of control, the foremost being the unlimited reliability and life expectancy of the components. Test units have been operating under full load, 24 hours a day for over 500,000,000 cycles.

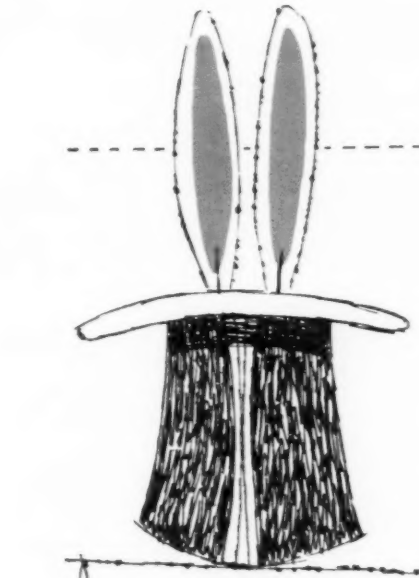
The pattern scanning devices consist of nothing more than a method of receiving an electrical signal from the pattern drum and transmitting it to the clutches or solenoids. Three different systems are available for use with any of the pattern attachments.

The first system incorporates a sleeve with a taped pattern on its circumference. Contact fingers ride on the surface of this drum, and if the drum is bare or exposed to the finger, contact is made between the finger and the drum. This system is frequently used in pattern development because of the ease of changing or correcting design.

The second system utilizes a phenolic fiber tube with the pattern milled into its surface. This type of control incorporates a scanning finger which actuates the modular type switching units. When the finger drops into a groove, it closes the electrical circuit; and when it rides up out of the groove it breaks the circuit.

The third system incorporates a photo-electric cell in place of the scanning finger, and the pattern is relayed to the system by means of reflected or non-reflected light.

All of the electrical systems contained in our pattern attachments for tufting machines are very simple circuits. They only look complex because of the number of components required to control the widths needed. Each control is merely duplicated according to gauge. Here again, the gauge needle spacing of the machine determines to a large extent how well control systems can be adapted to tufting machines. Electrical components lend themselves very well to small space requirements because they use wires to translate impulses or motions.



Candlewick

is the MAGIC word
in
the Tufting Industry

CANDLEWICK is the Tufting Industry's top-performing YARN.

With CANDLEWICK YARN goes—

CANDLEWICK Know-How to help solve your problems
CANDLEWICK Ideas to help spark production
CANDLEWICK "Put-up" for every need

Order your CANDLEWICK YARN in Cotton, Rayon, Nylon and Blends. *Our service matches our product in top-performance.*

CANDLEWICK YARN MILLS, INC.

Dalton, Georgia

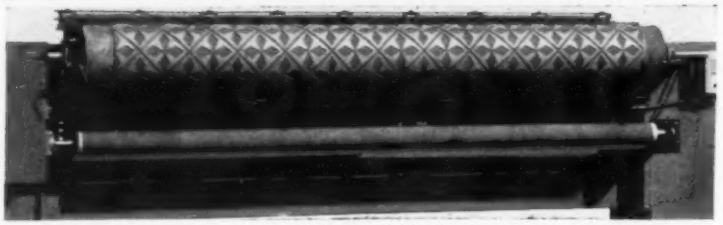
Mills

Candlewick Yarn Mills, Inc.
Dalton, Georgia

Candlewick Yarn Mills, Inc.
Royston, Georgia

March of the Tufteds

(from page 104)



The needles of this machine are controlled individually through this long pattern drum.

of pile, regardless of height, through individual cutter control. However, as was reported last year, such equipment is being developed.

Among the introductions of the past year is a tufting machine which permits the pile height, stitches per inch, and yarn feed to be dialed. Additionally it permits needle stroke to be changed without changing cams, and allows knife and looper strokes to be changed without extra adjustment.

There is also equipment for granting individual tension control for as many as 120 ends. This is in contrast to the customary six or eight tension roll machines used for textured effects.

Wilton carpet appearance is being effected by machinery giving cut high pile and low loop pile.

Scrim, in several weights, is being used to add dimensional stability to the finished carpet. The fabric may be of cotton, rayon, resin-treated paper, etc., and in woven (plain or leno) or tricot forms.

The cloth is applied during the normal latexing operation by leading the carpet from the oven as soon as the latex has lost its tackiness. While the carpet is out of the oven, the scrim (padded with pure latex) is applied to the uncured carpet latex. The two layers are then conducted as one back to the oven and there are vulcanized.

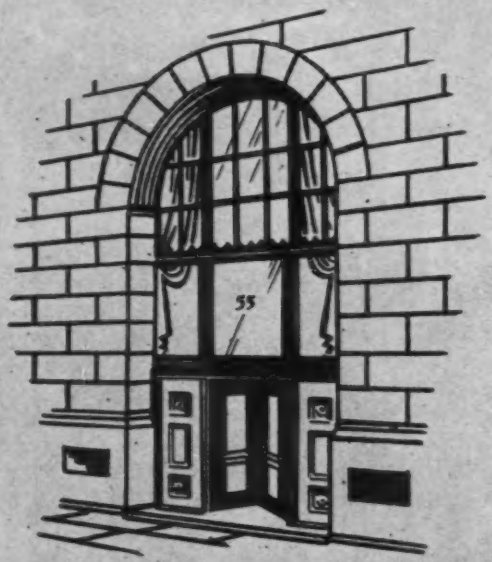
Since the scrim adds to the carpet cost, its use generally is restricted to carpets of premium quality. It also adds to the carpet weight, and necessarily to its degree of "boardiness." This latter quality is controlled in part by the choice of scrim weight, construction, material, etc.; and the added scrim material cost is offset in part by the use of less backing latex.

Although within itself the sheer bulk of a wide tufted carpet presents a problem in dyeing, the problem which defies immediate solution is the presence of so many "short" pieces to be dyed different colors. Usually in any one organization there is not enough of any one color produced to justify the purchase of continuous dyeing equipment. As a result, the jig remains the workhorse of the dyehouse.

Pressure dyeing has made its debut and has retired to lick its wounds. The pressures required to circulate the liquors eroded too

Our service is tailored to provide all the working capital any qualified client needs, without increased borrowing, diluting profits or interfering with management.

Information available for any manufacturer or distributor with $500,000 or more annual sales.



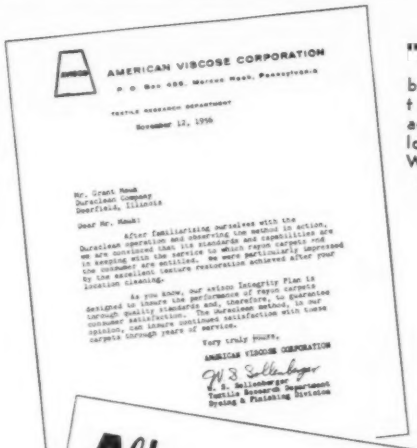
Textile Banking Company

55 Madison Avenue, New York 10, N.Y.

Providing operational financing for the apparel, electronics, furniture, leather, plastics and textile industries.

Subsidiaries:

T. B. C. Associates, Inc., New York Southwest Texbanc, Inc., St. Louis



AMERICAN VISCOSE CORPORATION

P. O. Box 086, Marcus Hook, Pennsylvania

November 12, 1956

Mr. Grant Hauk
Duraclean Company
Deerfield, Illinois

Dear Mr. Hauk:

After familiarizing ourselves with the method in action, Duraclean operation and observing the capabilities are we are convinced that its standards and capabilities are in keeping with the service to which rayon carpets and the consumer are entitled. We were particularly impressed by the excellent texture restoration achieved after your location cleaning.

As you know, our Avisco Integrity Plan is designed to insure the performance of rayon carpets through quality standards and, therefore, to guarantee consumer satisfaction. The Duraclean method, in our opinion, can insure continued satisfaction with these carpets through years of service.

Very truly yours,

AMERICAN VISCOSE CORPORATION

W. S. Sollenberger
W. S. Sollenberger
Textile Research Department
Dyeing & Finishing Division

"IMPRESSED

by the excellent texture restoration achieved after your location cleaning."
W. S. Sollenberger
American Viscose Corp.

Aldon
RUG MILLS INC. LENNI MILLS, PENNSYLVANIA

Duraclean Company
Duraclean Building
Deerfield, Illinois

November 27, 1956

ATTENTION: Grant Hauk

Dear Mr. Hauk:

Here is our evaluation of the Duraclean on location cleaning process based on observing the cleaning in the field, and Aldon's laboratory analysis.

We were particularly pleased with the texture restoration achieved through your cleaning process.

We approve this process for on location cleaning of our predominantly rayon floor coverings, and feel it is in keeping with better service to Mrs. Housewife.

Sincerely,

ALDON RUG MILLS, INC.

Alfred Barg
ALFRED BARG
Technical Director

AB/cb

cc: E. Graff
C. Johnson
M. Arn
A. Barg
B. Barg

"WE APPROVE

this process for on location cleaning of our predominantly rayon floor covering . . . in keeping with better service to Mrs. Housewife."
. . . Alvin Barg
Aldon Rug Mills, Inc.

MODERN TUFTING COMPANY
701-719 SOUTH SPENCER STREET
DALTON 2 2 GEORGIA

March 22, 1957

Duraclean Company
Deerfield, Illinois

Gentlemen:

Recently I had the opportunity to observe the Duraclean process in action on wall-to-wall carpeting in my own home.

As a result of the work done by the local Duraclean dealer on this six year old cotton carpeting, which had not been cleaned before, it is my opinion that the Duraclean process is superior to any on-location cleaning process with which I am familiar.

We have requested a copy of the Duraclean Service Registry for use when we are contacted for information as to where Modern Tufting products may be satisfactorily cleaned.

It is our belief that the standards of Duraclean service are in line with the high standards of quality maintained by Modern Tufting Company and will give our customers continuing satisfaction with our products.

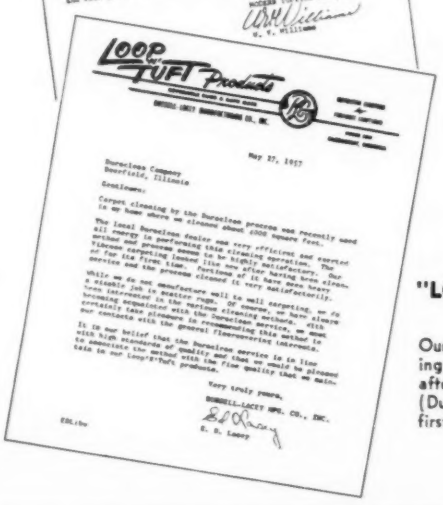
Very truly yours,

MODERN TUFTING COMPANY

W. V. Williams
W. V. Williams

"SUPERIOR

to any on-location cleaning process with which I am familiar."
. . W. V. Williams
Modern Tufting Co.



LOOP-TUFT Products

May 27, 1957

Duraclean Company
Deerfield, Illinois

Gentlemen:

Carpet cleaning by the Duraclean process was recently used in my home where we cleaned about 4000 square feet.

The local Duraclean dealer was very efficient and exerted all energy in performing this cleaning operation. The method and process seems to be highly satisfactory. The vibrant carpeting seems to be highly appreciative. The service and the time. Portions of it have been clean, or for the first time looked like new after having been satisfactorily.

While we do not manufacture wall to wall carpeting, we do a sizable job in scatter rugs. Of course, we would be pleased to recommend Duraclean service. We trust that we may certainly take pleasure in recommending this method to our contacts with the ground floorcovering industry.

It is our belief that the Duraclean service is in line to maintain the standards of quality and that we would be pleased to associate the method with the fine quality that we maintain in our Loop-Tuft products.

Very truly yours,

RUSSELL-LACEY MFG. CO., INC.

E. D. Lacey

EDL:bv

"LOOKED LIKE NEW

Our Viscose carpeting looked like new after having been (Dura) cleaned for first time."
. . . E. D. Lacey
Russell-Lacey Mfg. Co.

Here's what

E. D. LACEY
ALVIN BARG
W. V. WILLIAMS
W. S. SOLLENBERGER

Say about Carpet cleaning by DURACLEAN

Comments such as these by prominent manufacturers are being echoed daily by thousands of homeowners in over 10,000 U. S. communities serviced by the Duraclean Dealers of America. The reason for this is that each dealer subscribes to an identical method of cleaning, utilizing *standard* equipment, *standard* chemicals, and *standard* techniques.

This unique process, pioneered and developed by the Duraclean Company now in its 29th year, was demonstrated at the Fontainebleau convention last year. There you saw fiber texture restored, and the carpet cleaned rapidly, effectively and conveniently. And because there was no scrubbing or soaking, there was no shrinkage.

The Duraclean process has been commended by the Consumer Service Bureau of Parents' Magazine, and awarded the Tested-Certified Seal of the American Research and Testing Laboratories . . . additional proof as to the safety and effectiveness of this process. The Duraclean Dealer also provides mothproofing, soil-retarding, flame-proofing and spot removing services—a complete program in the cleaning and maintenance of carpets and home furnishings.

Write for information concerning our testing facilities and our program of cooperation with manufacturers and retailers.

DURACLEAN DEALERS OF AMERICA

Duraclean

8-426 Duraclean Bldg.
Deerfield, Ill.

much fabric. There were other difficulties, too, which decided against the system, at least for the present.

Pad dyeing progress is virtually at a standstill. There is work being done, however, to offset some of its difficulties.

Twist-set nylon is in great use, and is giving the dyers a set of new problems. The yarn levels well if the twist is sufficient, but streaks badly when the twist is reduced considerably. The latter is a practice some tufters use to get better cover with a given quantity of yarn. Two alternatives are recognized: (1) learn to level the dyeings of low-twist yarn; or (2) use enough high-twist yarn to get the needed cover.

There is some sentiment toward carpet dyeing at the dealer level. Rolls of the 15′ and 18′ plain would be stocked for cutting to the desired length. The housewife would decide the color, and the dealer would do the dyeing.

It is pointed out, however, that the dealer would have to approach the situation with care. Some of the less expensive carpets have sparse cover, and injudicious dyeing could leave a dark brown jute backing grinning through a jade green pile. Some such combinations could be downright ghastly.

One tufting firm dyes carpeting now (a 12′ x 50′ size is quoted as suggesting the minimum for such orders) at a 10% premium to suit the housewife's taste.

The same tufting equipment which permits the carpet tufter to insert designs heretofore executed only by human hands has freed the bedspread industry from the same yoke. In so doing, the equipment places the tufter on reasonable par with the weaver in the production of the higher priced spreads.

Previously, no more than a couple of years ago, the tufter could not compete with the weaver in the higher priced spreads (the woven ones looked better), nor could the weaver stay in the running when the prices dropped into the lower brackets.

Now there is more common ground, but the tufting industry still can produce spreads on the $2.00 to $4.00 wholesale range without much competition from the weavers. The "heirloom" type in chenille ($5.00 range) is considered "nicer" than its woven counterpart. The top wholesale price for a tufted spread seems to be about $25.00.

Tufteds up in value

The total shipments of tufted textile products amounted to $187.5 million during the second half of 1957. This compares to shipments of $168.8 million during the first half of 1957 and $164.6 million during the second half of 1956.

Tufted Rugs and Carpeting. The value of manufacturers' shipments of tufted rugs and carpeting during the second half of 1957 was $154.1 million. This represents a 7 per cent increase compared to the shipments for the previous half year, and an 18 per cent increase when compared to ship-

Pile yarn is the heart of tufted carpets

You're sure of good stout-hearted quality with pile of

Revonah Long-Staple Yarn

These fine yarns lengthen wear, "sharpen" appearance, lessen linting and in Nylon, positively resist pilling.

Manufactured by MALCOLM SPINNING CO.

Revonah uses long-staple fibres exclusively and insures quality with electronically tested spinning techniques.

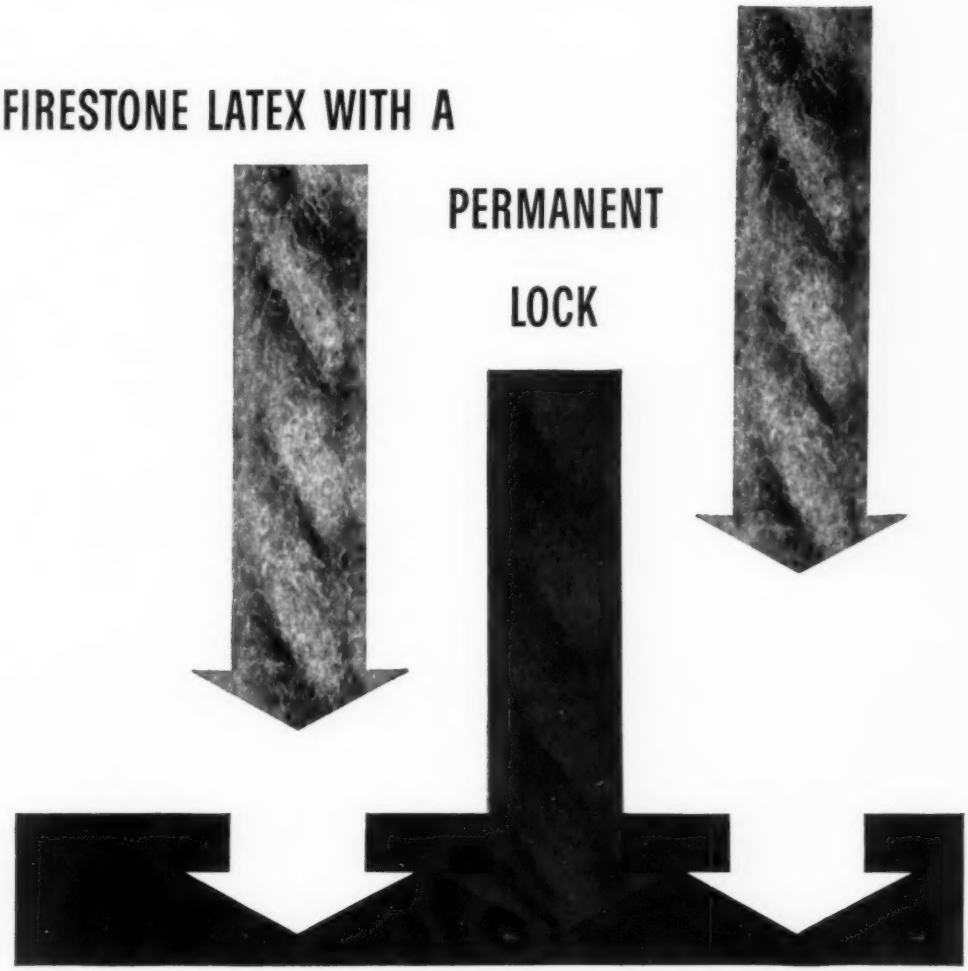
REVONAH SPINNING MILLS

HANOVER, PA. (Southern Repr.: Shoffner Textile Co., Calhoun, Ga.)

SPINNERS OF Revonah Quality SUPERIOR JUTE BACKING YARN

Revonah Spinning Mills cordially invites inquiries from tufting manufacturers for samples of yarns and prices

NEW FIRESTONE LATEX WITH A PERMANENT LOCK



New FR-S 151 permanently anchors tufts to rug backing, stops raveling and shrinking, prolongs rug life like never before!

Now Firestone brings you a brand-new kind of synthetic latex, specially designed to do your tufted carpet backing job better. New FR-S 151 locks each individual tuft in place to stay, permanently welds tufts to backing for new, long life. Rugs lie flatter and look better because FR-S 151 eliminates shrinking, puckering or raveling at edges and seams.

New FR-S 151 latex contains a polymer characterized by high-tensile strength, high modulus and excellent color. In addition, it provides greatly improved heat, light and age resistance. Because of its low-odor level and good pigment binding qualities, new FR-S 151 latex is exactly tailored to your needs.

This new major research development from Firestone will help you produce stronger, longer wearing, more attractive and saleable tufted carpeting for less cost. Get together with your Firestone Technical Service representative this week. Write, wire or phone for details. FIRESTONE SYNTHETIC RUBBER and Latex Division.

Firestone

BETTER RUBBER FROM START TO FINISH

Copyright 1958, The Firestone Tire & Rubber Co., Akron, Ohio

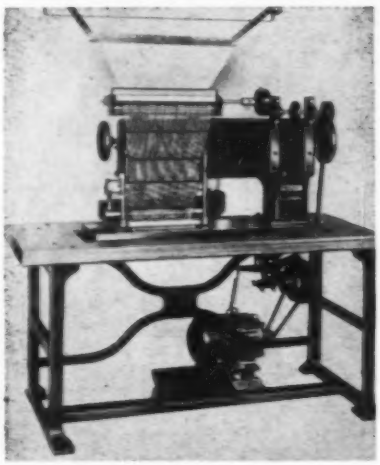
ments during the second half of 1956. The value of shipments of tufted rugs larger than 4 x 6 feet was 8 per cent above the previous half year, while shipments of rugs 4 x 6 feet and smaller increased by 1 per cent.

Tufted Robes and Bedspreads. The value of manufacturers' shipments of tufted bedspreads for the second half of 1957 was one per cent lower than shipments during the comparable period of 1956. During the same periods, dollar shipments of tufted robes declined 13 per cent. (Comparisons between consecutive semi-annual periods for these products have not been made because seasonal influences have a major effect on manufacturer's shipments.)

Materials Consumed. Manufacturers consumed 156.0 million pounds of yarn and fabric for the production of tufted products during the second half of 1957. This was 13.6 million pounds more than the reported consumption for the previous half year. The consumption of cotton tufting yarn increased from 31.0 million pounds to 33.5 million pounds, while the consumption of 100 per cent rayon and acetate yarns increased to 53.6 million pounds from the 52.7 million pounds consumed during the first half of 1957. Wool yarns consumed in tufted products was 7.8 million pounds, while the consumption of other tufting yarns primarily nylon and nylon and rayon mixtures) was 10.6 million pounds for the second half of 1957.—*Source: Report dated April 16, 1958, prepared by Bureau of Census, Industry Div., Textile Branch.*

BROAD STREET *Tufting Machines*

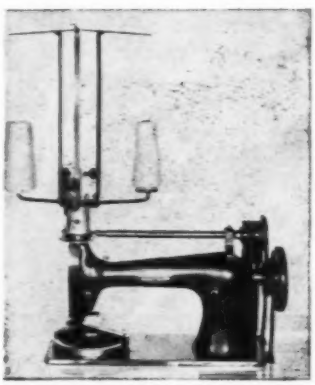
Standing the test since 1947



Model 55

Model 55 Table Model Carpet Machine with yardage machine features, including roller cloth feed and positive yarn feed (Patented). Built to make throw rugs or yardage, in cut or loop, and with extra attachment is easily changed from one to the other. Newly designed High-Low Loop Pattern attachment available for Model 55 and other table model machines.

Scroll and Floral Overlay Machines Outstanding for creating Scrolls, Floral Designs, Circles, Pin Wheels, etc. on Chenille backgrounds in one easy operation.

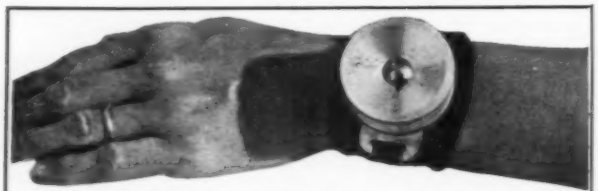


Scroll and Flower Overlay Machine

Contact us about your tufting machine requirements or problems. Latest catalogs and price sheets available.

BROAD STREET MACHINE COMPANY

2614 BROAD ST. Telephone Inquiries Invited: AMherst 7-4376 CHATTANOOGA 8, TENN.



LOOPER LATEX DISPENSING DEVICE

In addition to the latex dispenser shown above, Looper manufactures G.L. 50 "Looper Splice" compound for cotton and viscose, and **RUG MENDING GUNS.** You *know* the product is good when it's made by Looper, inventor of the original chenille machine.

GLENN LOOPER MFG. COMPANY

P. O. BOX 76 DALTON, GEORGIA

SPECIAL OFFER
TUFTED TEXTILES
1956 and 1957

Tufted Textile reprints for both 1956 and 1957 are available with subscription (new or renewal) at regular price of $3. Just tear out this page and note if new or renewal—attach $3 or we'll bill you for it—send to TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta, Ga.

(Foreign Rates on Request)

A quality carpet containing Avisco fibers

AVISCO®

INTEGRITY TAG

What do best sellers have in common?

AVISCO RAYON, specially engineered for carpets, takes clear, fast colors that add sell. It contributes luxurious texture, too, and desired pile density at minimum cost. We award the Avisco Integrity Tag to every style of carpet and area rug which passes tests for quality content and construction.

AVISCO RAYON, designed for tufted bedspreads, has practically eliminated lint, and its affinity for color adds excitement to every price line. The Avisco Integrity Tag shows that these bedspreads are sun-fast and will wash without streaking, fading or shrinking out of true size.

A quality product containing Avisco fibers

AVISCO®

INTEGRITY TAG

MACHINE WASHABLE
AT WARM SETTING

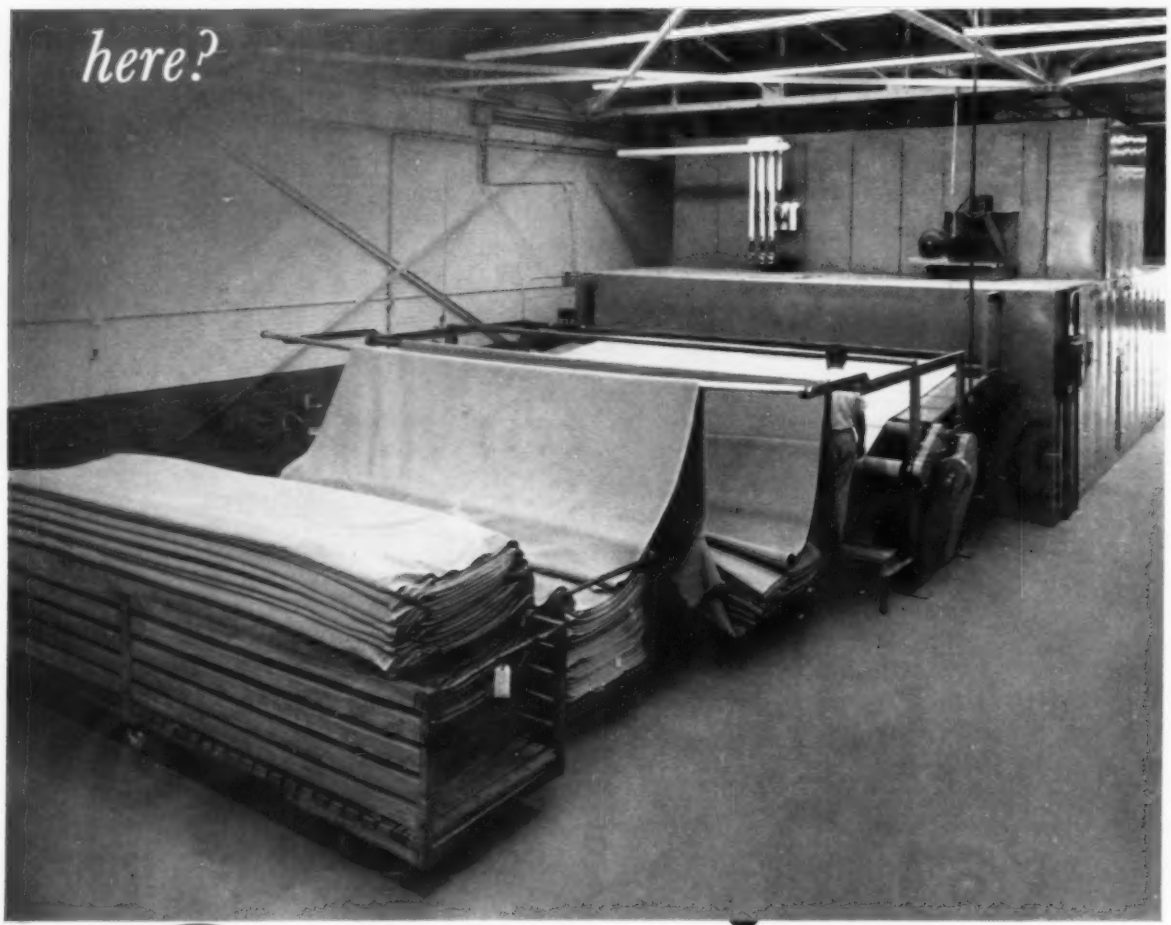
AMERICAN VISCOSE CORPORATION
350 FIFTH AVE., NEW YORK 1, N.Y.
LA 4-7200

A custom-blended carpet backing by General Latex — that is what's going on here.

what's going on here?

And for this tufted carpeting manufacturer, it's like rolling on profit by the yard. Because this special fast curing compound locks loops tight; adds dimensional stability . . . is odor-free . . . lends durability . . . provides just the right "hand" . . . gives highly saleable extra quality at minimum cost.

There's a custom-blended General Latex compound that can put an end to your carpet or rug backing problems. And to serve you better and faster, there's a General Latex plant in Dalton, Georgia, in the heart of the tufted industry.



GENERAL LATEX AND CHEMICAL CORPORATION

. . . 666 Main Street, Cambridge 39, Mass.

General Latex and Chemical Corporation (of Ohio) Ashland, Ohio
General Latex and Chemical Corporation (of Ga.) 1206 Lamar Street, Dalton, Georgia
General Latex & Chemicals (Canada) Ltd. 425 River Street, Verdun, Montreal, Canada
General Latex & Chemicals (Canada) Ltd. Brampton, Ontario, Canada

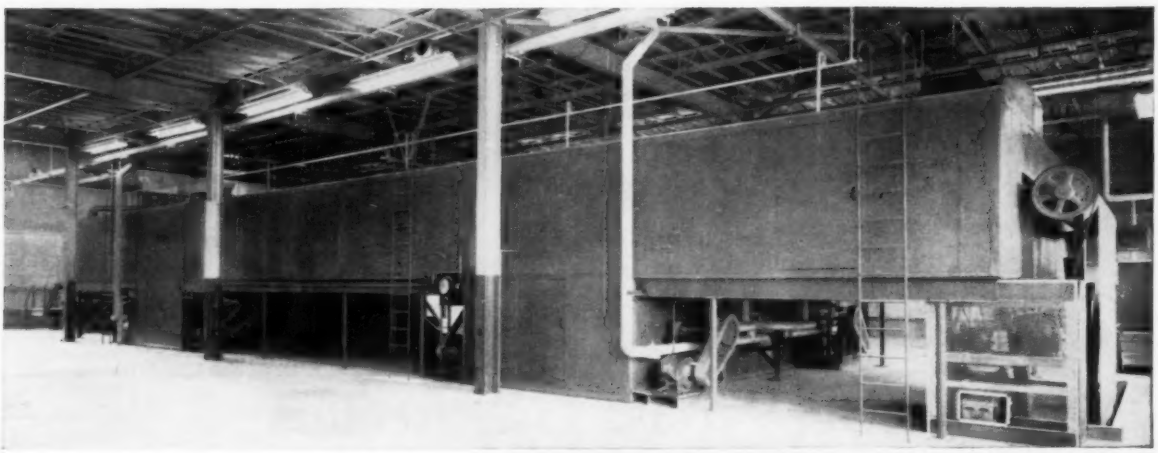
VULTEX

representatives in principal cities — exclusive agents for sale in U. S. A. of Harrison & Crosfield Malayan Latex — sales agent in U. S. A. for Goodyear's PLIOLITE Latices

For further information use Handy Return Card, Page 209

Proctor

equipment for the tufted carpet industry

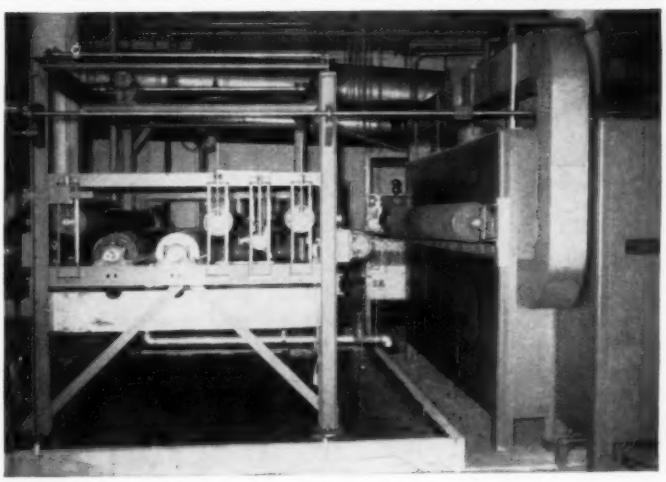


PROCTOR Double Impinge Air Carpet Dryer

This versatile machine dries all types of tufted carpet—from the very lightest to the heaviest—and all combinations of wet goods, back coated or face treated carpeting, whether steam or anti-soil treated. The driven-roll conveying system applies a controlled lineal tension—there is no stretching or distortion. The carpeting leaves the dryer in perfect condition, with the prescribed final moisture content.

PROCTOR Latex Applicator For Back Coated Carpet

Designed to provide adjustable tension on the carpet, adjustable roll speeds for uniform application and predetermined film thickness of the latex, plus a spreader roll with adjustable speeds to keep the carpet flat and at maximum width.



OTHER PROCTOR EQUIPMENT FOR THE TUFTED CARPET INDUSTRY

• Opening Equipment • Blending Units • Stock Dryers

Proctor

Let PROCTOR study your carpet machinery needs.
Let PROCTOR help solve your finishing problems.

PROCTOR & SCHWARTZ, Inc. PHILADELPHIA 20, PA.

MANUFACTURERS OF INDUSTRIAL DRYING EQUIPMENT AND TEXTILE MACHINERY

LEE'S THREE SIGNS OF SERVICE TO TUFTED TEXTILES

LEE'S

TEXTILE INDUSTRIES has been printed at the LEE plant for 45 years

116 East Crawford Street, Dalton, Ga. — Phone 1200

Our Second Half Century

SUMMERVILLE manufacturing co.

Summerville, Georgia

Producers of Quality Cotton .....

Rug Backings Upholstery Backings

..... *fabrics that meet exacting specifications*

Please address all inquiries to:

William L. Barrell Co. of N. Y., inc.

J. Morton Curran, Jr., President

75 Worth Street ● **Telephone: BArclay 7-8700** ● **New York 13, New York**

Southern Representatives:

THOMAS K. CONNOR	2302 West End Ave. Nashville 5, Tenn.	Tel. BRoadway 7-0555
KEITH A. QUARTERMAN	1430 W. Peachtree St. Atlanta 9, Ga.	Tel. TRinity 2-6315

Above right — birthplace of J. R. Geigy, Basle, Switzerland.

200 years Geigy

The history of synthetic dyestuffs is the history of Geigy

Two centuries ago, in the city of Basle, Switzerland, a native young merchant, Johann Rudolf Geigy, established a business as a dealer in "Materialwaren" . . . drugs, colours, pharmaceutical preparations and spices.

From inception, Geigy was associated with colouring. In 1859, three years after Perkin discovered mauve, Geigy entered the synthetic dyestuff field.

Being 200 years old is one thing but, celebrating 200 years of progress is something else. From a handful of people in 1758, Geigy today employs over 8,000 in over 40 Geigy companies throughout the world.

During these two centuries, Geigy has been privileged to supply the textile industry with many revolutionary dyestuffs, some of them history-making firsts that led to new and improved techniques in dyeing. In the years to come we shall continue to strive to make even greater contributions to the fields we serve by furnishing them with products of progress.

GEIGY DYESTUFFS: Division of Geigy Chemical Corporation, Saw Mill River Road, Ardsley, N. Y. Branches in all textile-producing centers.

Modern new Geigy plant at Ardsley, New York. ▲

▼ Geigy headquarters in Basle, Switzerland.

THE DALTON GROUP:

THREE PLANTS FOR UNEXCELLED SERVICE TO THE TUFTED INDUSTRY

DALTON CARPET FINISHING CO., INC.
ALL TYPES DYEING
SHEARING
FINISHING
LABORATORY FACILITIES
114 E. WALNUT DALTON, GA.

★

DALTON CARPET COATING CO., INC.
ALL TYPES LATEXING
FOAMING
SCRIMMING
TENTERING
110 E. WALNUT DALTON, GA.

★

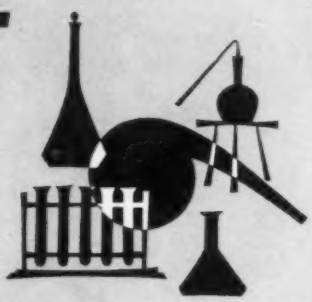
DALTON SPREAD LAUNDRY, INC.
VAT DYEING
PIECE DYEING
BECK DYEING
LABORATORY FACILITIES
411 S. McCAMY DALTON, GA.

UNPARALLELED EXPERIENCE
LABORATORY SERVICE
MODERN EQUIPMENT
LATEST TECHNIQUES

"THERE IS NO SUBSTITUTE FOR EXPERIENCE"

EMKAY

SERVING
INDUSTRY
WITH EMKA
AND REXO
CHEMICAL PRODUCTS



MANUFACTURING CHEMISTS
EMKAY
CHEMICAL COMPANY
EMKA PRODUCTS · REXO

EMKAY CHEMICAL COMPANY
319-25 Second St., Elizabeth, N. J.

Hickory Spinners, Inc.
Lavonia Manufacturing Co.
Shuford Mills, Inc.

Cotton, Rayon, Nylon, Wool Yarns and Blends Natural and Solution-Dyed for the Tufting and Rug Industry . . . All Counts and Put-ups

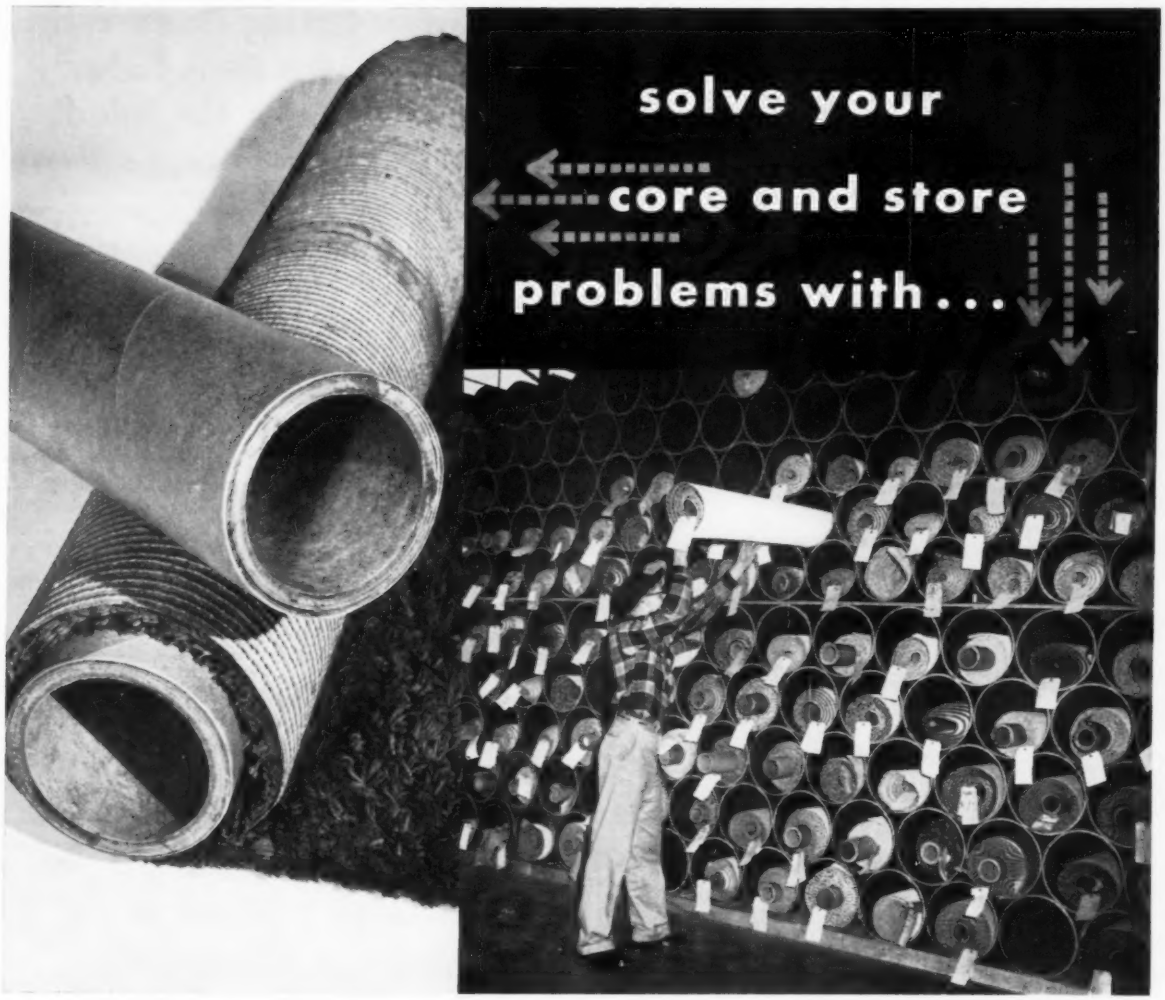
---

George S. Johnston

Frank M. Carter
Marshall Goree
Associates

607 Provident Bldg. Chattanooga 2, Tennessee

Phones 6-3840 and LD 64



SONOCO CARPET CORES AND STORAGE TUBES

CARPET CORES. Sonoco's Super DURO carpet cores have proven superior to any yet developed. Stronger, lighter, and with exceptional breaking strength. Immediate delivery on all standard 9, 12 and 15 foot lengths, in standard diameters. Also made in longer lengths and in any diameter and wall thickness. Supplied in plain or solid colored stock with printed, decorative inside and outside wrap optional. Samples sent on request.

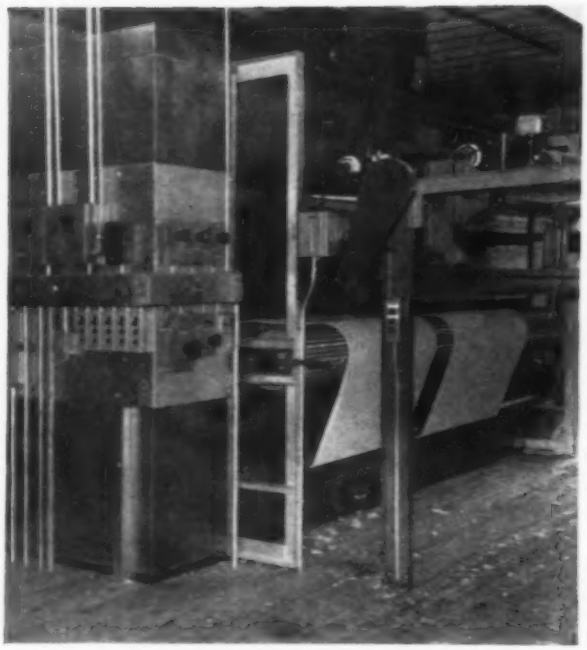
STORAGE TUBES. Sonoco Storage Tubes provide an economical system of storing rugs and carpeting, making each roll instantly accessible. Costs 5 to 8 times less than other systems. Saves time and labor in handling. Keeps stock in better condition. A Sonoco Storage Tube system can be installed easily and quickly. An efficient inventory control system can be established by simply lettering and numbering the tiers. Fast delivery on standard diameters up to 36″ I.D., in regular lengths. Write for complete information.

SONOCO
Cores and Storage Tubes

SONOCO PRODUCTS COMPANY

Main Office — Hartsville, S. C.
- Mystic, Conn.
- Lowell, Mass.
- Longview, Texas
- La Puente, Cal.
- Brantford, Ont.
- Akron, Ind.
- Phillipsburg, N. J.
- Philadelphia, Pa.
- Atlanta, Ga.
- Granby, Quebec
- Mexico, D.F.

1632



New Latex Curing Oven With Built-in Tenter Ends Latex Curing Problems for Good!

This extremely versatile installation is capable of curing latex backing on carpet at speeds in excess of twenty feet per minute. Wide carpet is run on the tenter frame on the first pass, on the belt on the second pass, and on rolls on the third pass. Ends curing problems for good!

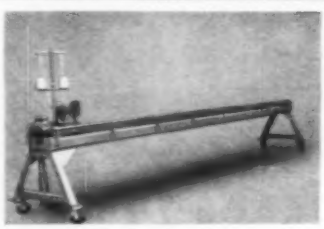
Strips can either be run on rolls on the first pass, on the belt on the second pass, and on rolls on the third pass, or the belt can be automatically reversed and the strips run single pass on the belt. Unit is heated by natural gas. All drives can be synchronized with vernier rheostats and overall speed is controlled by a master rheostat. Tremendous savings in duck and jute backing are accomplished by use of the tenter.

Dalton Sheet Metal Co., Inc. also has available newly designed steam wet-out boxes, beaters, "J" boxes, Rolla-Cotas, roll-up machines, folding machines, scrim applicators, and other textile specialties.

WRITE TODAY FOR BROCHURE COVERING THIS EQUIPMENT

DALTON SHEET METAL CO., INC.

439 S. McCAMY STREET
DALTON, GEORGIA



FOR TUFTED CARPETS

Carpet Railway Sewing Machine of heavy construction. Fitted with union special head.

VACUUM EXTRACTOR

With patent re-enforced adjustable slot and automatic ring type slot seals.

GIVES EXCELLENT EXTRACTION— WITHOUT CRUSHING THE PILE

BIRCH BROTHERS, Inc.

Harold W. Birch Clifford W. Birch, Jr.

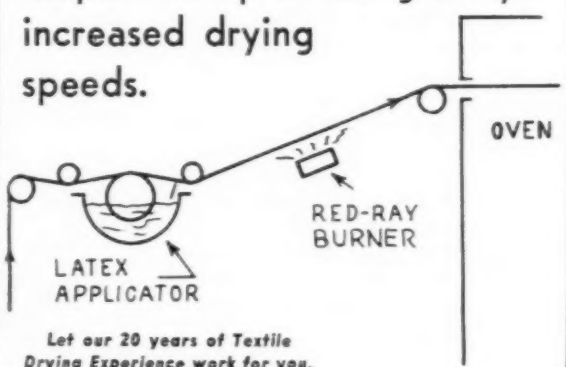
Phone: PRospect 6-3512
SOMERVILLE 43, MASS.

Dyeing and Finishing Machinery and Mill Sewing Machines

Southern Representative:
JOHN C. COSBY, P. O. Box 212, Phone: CEdar 5-5926
Greenville, S. C.

RED-RAY

Radiant Heat Pre-Dryer . . . applied to latex coating on carpet will provide greatly increased drying speeds.



Let our 20 years of Textile Drying Experience work for you.

Write to:

RED-RAY MFG. CO., INC.

318 Cliff Lane, Cliffside Park, N. J.
or phone: WHITNEY 3-1000

Among the great producers of aluminum, only Reynolds makes aluminum yarn. Reynolds continuous research in the field has been responsible for major product developments, all incorporated in the complete line now known as **REYMET***

Out of Reynolds pioneering comes today's brilliant and durable Reymet Continuous Filament in Mylar†...and the latest product development: Reymet Staple (patent applied for).

For a dependable source of dependable quality, use...

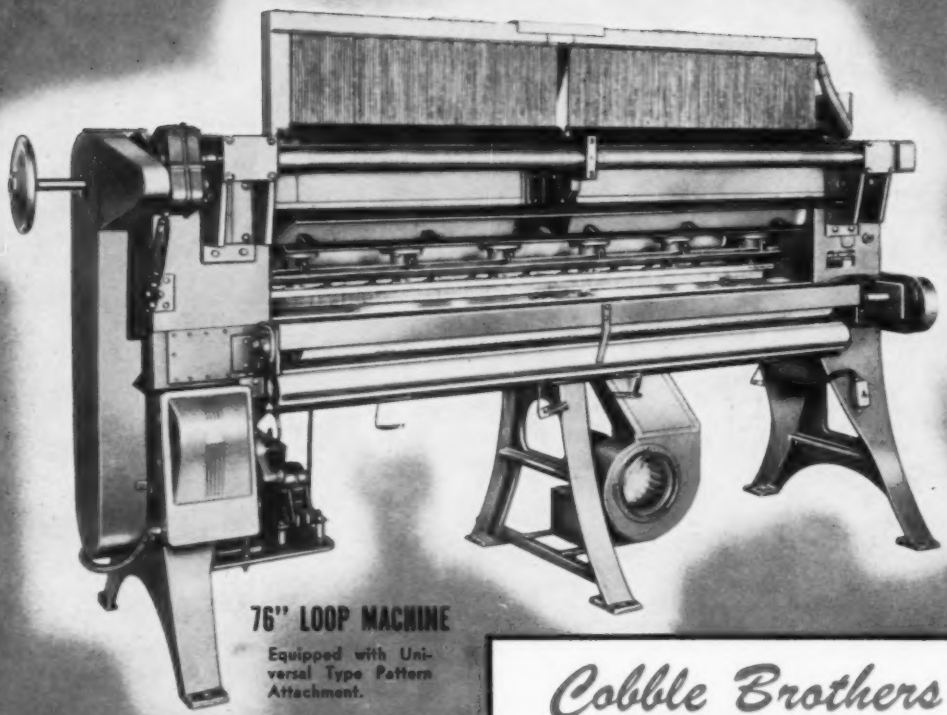
REYMET

* Registered trade mark for Reynolds Aluminum Yarn. Call any Reynolds sales office. Or write to Reynolds Metals Company, Richmond 18, Va. Canadian Representative: W. J. Westaway Company, Ltd., Hamilton, Ontario, Montreal, Quebec.

†DuPont trade mark for its Polyester film.

Watch Reynolds All-Family Television Program "DISNEYLAND", ABC-TV

COBBLE
TUFTING MACHINES



76" LOOP MACHINE

Equipped with Universal Type Pattern Attachment.

Cobble Brothers
UNIVERSAL
PATTERN MACHINE

Just a few of the unlimited number of rug designs that can be made on Cobble Brothers Loop Machines equipped with Universal Type Pattern Attachment.

COBBLE BROS. MACHINERY CO.

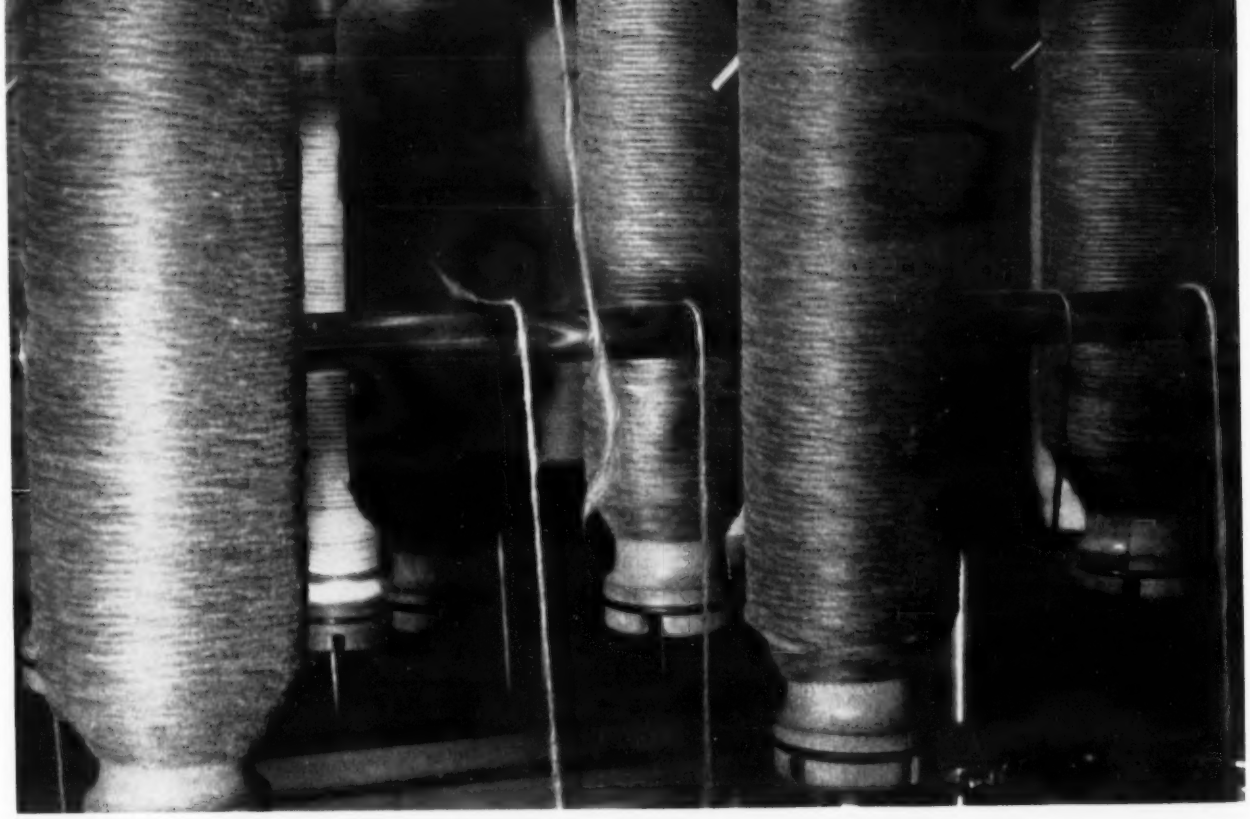
RIVERSIDE DRIVE • PHONE OX 8-3481 • CHATTANOOGA, TENN., U.S.A.
GATE STREET WORKS • BLACKBURN, LANCASHIRE, ENGLAND

OVERSEAS AGENTS: ANDRE MANUEL, 82 Blvd. Haussmann, Paris 8, France · NOEL P. HUNT & CO., Pty. Ltd., 1-11 Hawke St., Melbourne C1, Australia

Tear along this line to post in spinning room

MOVE THE PIECES BEFORE THE BLOWERS DO!

Dangling ends can cause slubs and doublings



Textile Industries
23

Textile Industries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to the Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

BREAK IT OUT NOW!

A customer saved is a customer earned!

Textile Industries POSTER SERVICE

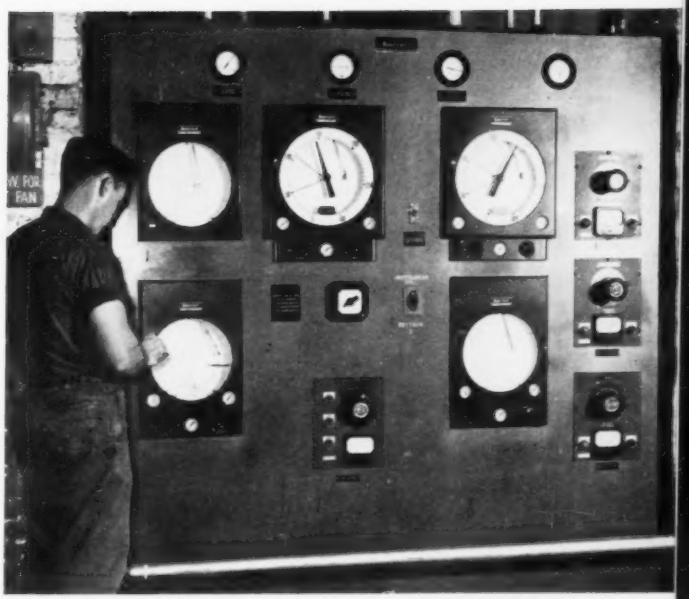
This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to the Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

Tear along this line to post in twisting room

"We automated our bleachery"

Control system and combined rope and open-width bleach range is efficient, saves floor space, and cost $33,000 *less than a conventional range*

by W. O. Bozeman, Jr.
Superintendent of Bleachery
Russell Manufacturing Co.



Main instrument panel of the new bleach range contains instruments to record and control steam flow, water temperature, No. 1 J box temperature, steam pressure, and No. 1 washer water flow. A similar panel controls second and third washer water flows and No. 2 J box.

Exclusive

TWO innovations in continuous bleach range operation are helping us to produce top quality cottons faster and more economically at the Russell Manufacturing Co.

In 1956 we decided that we needed to expand our bleachery operation. Aside from our interest in erecting a new bleach range that would be economical in construction and operation, we wanted to conserve floor space and still process cloth faster and more efficiently than with our older range. We felt the solution to these problems might lie in a combination of open-width and rope processing, employing the major advantages of each [see TEXTILE INDUSTRIES for September, 1956, pages 94-96].

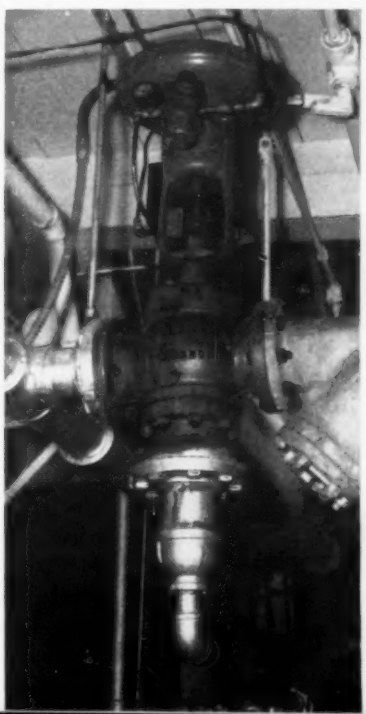
Since no one company could furnish everything needed, it was necessary to purchase the equipment and build our own range. William Sandlin, assistant to the general superintendent, directed the project; a control system to fit our specifications, including the sizing of valves for proper flows, was designed by Minneapolis-Honeywell's Brown Instruments Division.

Washer Size Reduced. At the entering end of the new range, cloth that has been singed and treated with enzymes for desizing is passed through two open-width washers and a caustic saturator. It is then allowed to run into a single heating tube J box where it remains for approximately one hour. As it passes out of the J box the cloth is converted to rope form and passed through the first space-saving rope washer. This arrangement allows considerably more washing time in a given amount of space than an open width washer.

As the cloth comes from the rope washer it is opened, run through the peroxide saturator, and into a second J box. As it passes from the second box it is returned to rope form for the second space-saving washer and then goes to the drying section. This rope-to-open width conversion alone has saved valuable floor space by reduction of washer size.

To accompany this new idea in process equipment, new methods were devised for controlling J box temperature, washer water temperature, and washer water flow. These ideas were aimed toward more accurate control of the system and consequent faster running

This three-way mixing valve is the heart of a new idea in washer water temperature control. All washers use water of the same temperature, therefore requiring only one valve and one temperature control instead of three.



Test methods for wash and wear evaluation

■ LABORATORY test methods for determining the wash and wear properties of fabrics and garments have been developed and published by the Textile Fibers Department of the Du Pont Co.

Wash and wear garments, according to the bulletin (X-83), are those that will satisfactorily retain their original neat appearance after repeated wear and laundering with little if any touch-up ironing.

The "automatic wash and wear garment" can be washed and dried entirely with automatic home laundry equipment.

Equipment needed for conducting the tests includes an agitator type of automatic washing machine, an automatic tumble dryer, some means of hand washing and drip drying, an evaluation area, and an ironing area with steam or dry iron.

The method described recognizes that no single laundering procedure can be chosen as an ideal test method. Therefore, any or all of four procedures available to the consumer may be used for evaluation: (1) Hand wash, drip dry; (2) machine wash, drip dry; (3) machine wash, tumble dry; (4) machine wash, hang dry.

Garments or fabrics are rated with regard to the following: (1) wash crease retention, (2) wear crease retention, (3) wash wrinkling, (4) wear wrinkling, and (5) seam puckering, fraying or failure.

of the range without errors such as overheating in the J box or improper washing.

J box temperature control was based on the measurement of the temperature at the cloth inlet by a thermocouple. This thermocouple sends its signal to an electronic circular chart recording-controller. The pneumatic proportional-plus-reset control unit of the instrument operates a diaphragm control valve in the steam line to admit more or less steam as needed to maintain the set temperature (usually around 212 F). Control of the box from the cloth inlet temperature provides excellent results with J box heat varying only one or two degrees in 24 hours.

Controlled Temperature. For the convenience of the operator, a three-way spring loaded switch is installed with each J box temperature controller so that he can periodically check the heel temperature of the box and the temperature of the steam in the line upstream from the control valve. The switch is loaded so that it will return to center position and the measure of cloth inlet temperature when released.

Provided with these precautionary temperature readings, the operator can be certain that cloth in the heel of the box is holding the temperature needed for processing, and that the heating steam does not contain appreciable superheat that would cause unsatisfactory bleaching if it were admitted to the box. With the close control provided on each J box, only the steam needed for the process is used. This results in a sizable saving of expensive steam. Also, with such close control, we can run the range faster and process more first quality cloth than would otherwise be possible.

We did not use a separate instrument to measure and control hot water temperature in each washer as is commonly done. We decided that since all washers use water of the same temperature, one master recording-controller could be used for all washer water. Accordingly, we installed a three-way mixing valve to blend hot and cold water in a six-inch line leading from the water supply. From this line water of the proper temperature is piped to each washer. A thermocouple inserted in the line downstream from the mixing valve senses the temperature of the prepared water and sends the signal to a circular chart recording-controller. The pneumatic control unit of this instrument positions the three-way mixing valve to maintain the washer water at a preset temperature.

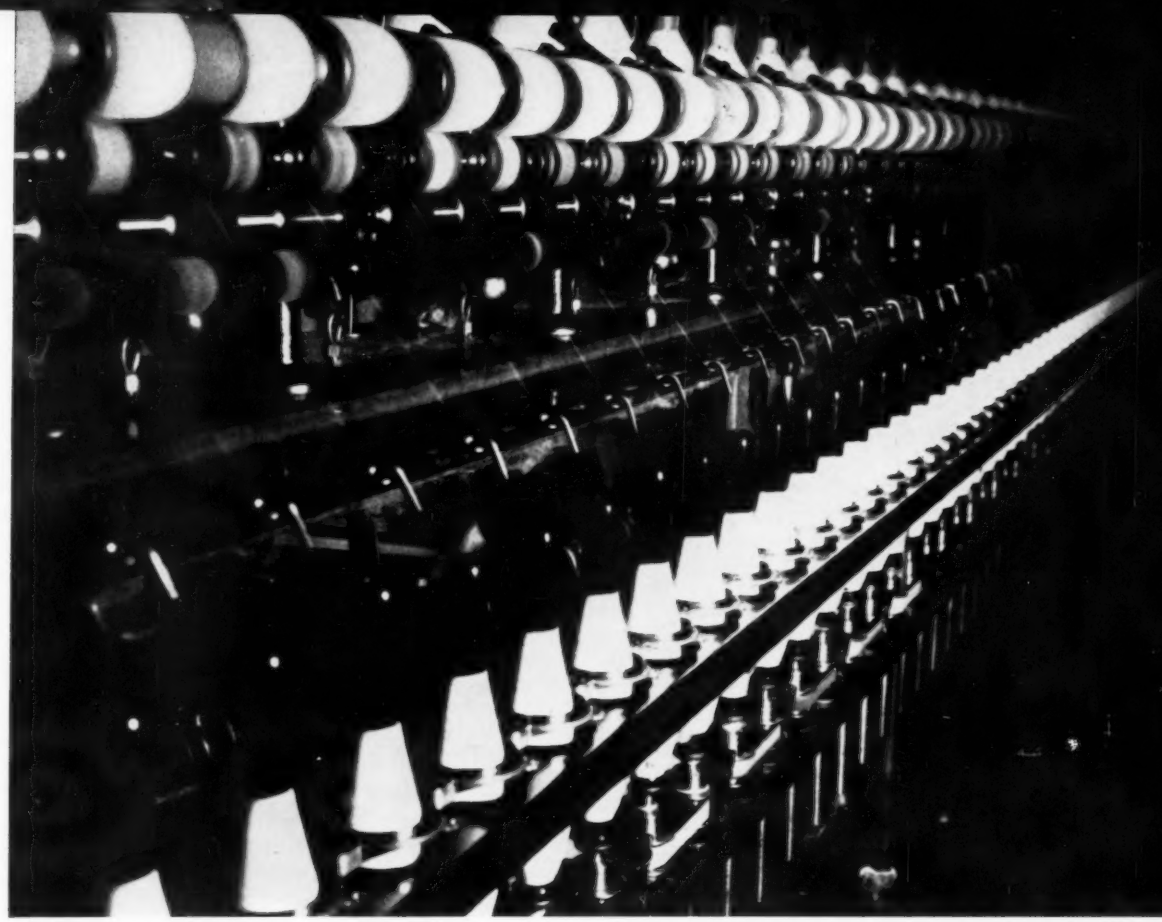
Individual Thermocouples. Again, to allow the operator to check the water temperature in the actual process, a four-way switch is connected with the control thermocouple and a thermocouple located in each washer. Thus, the operator can quickly check the water in any washer at any time to make certain that it is at a proper temperature and then return to the control thermocouple.

Water flow at each washer is controlled by an integrating flow recorder with pneumatic proportional-plus-reset control. The control unit operates a diaphragm control valve in the mixed water line to admit only the water needed for proper processing—saving that extra "make sure" amount of water and fuel that would be expended in each washer if flows were manually controlled. These flow recorders also provide a day-to-day record of water consumption for cost accounting and for use in spotting system failures through use of excessive water at any point.

Another feature of the hot water control system is that it shuts off all hot water flows after five minutes of downtime on the range. We estimate that this alone saves 1,250 gallons of expensive hot water each time we stop the process.

Substantial Savings. As a further check against the use of superheated steam that might dry cloth, a recording pressure gauge measures steam pressure upstream from the diaphragm control valves admitting steam to the J boxes. If there is appreciable steam pressure remaining at this point, the operator can detect it before it causes a sudden rise in temperature (superheating) when the steam enters the J box at atmospheric pressure. An integrating flow recorder is also connected to a meter body tapped off the steam line to provide the mill's accounting department with a record of over-all steam use on the range.

The combination of the control system and the use of a rope and open width range allows us to run cloth at speeds up to 200 yards per minute with continuous automatic control, and has saved us an estimated $33,000 in initial expense, 35 feet of mill space, and an unestimated amount of steam and hot water.



Breaking bottlenecks in spinning

Even with a perfect system of checks and double checks among fixers and foremen, even with a spinning room that is mechanically correct, high employee morale is needed to "make it click." This, too, is part of the everyday plans of successful executives.

by Maley Chagro
Exclusive

THE HUMAN factor, or any factor that daily faces the line supervisor in any production department, must of necessity require his thoughtful study. No problem, no factor, can be discarded as being too trivial for attention. What appears to be trivial in the incipient stage may soon develop into a serious bottleneck.

In the spinning department of an eastern mill, a planned study once was undertaken to determine the causes of recurring problems and occasional bottlenecks. New methods, based on mutual cooperation and better grasp of employee relationships, designed to maintain and increase production, and to maintain and improve quality were in the offing. Once the causes were determined, positive action was taken to eliminate such problems.

A few years ago, in this same plant, persons caught smoking in the spinning department were subject to immediate discharge. This rule naturally applied to supervisors, too. However, the supervisors could occasionally manage a smoke or two while on

routine visits to staff departments where smoking was allowed. Obviously such a rule had many flaws.

There was no discrimination between skilled and unskilled workmen when the rule had to be invoked. Females who smoked "sneaked" one more often in the rest rooms than could the men (the supervisor could walk right in on the men the moment he smelled smoke). A minor problem grew to a major one.

It cost considerable money to train employees to become skilled workers only to lose some of them through an act of carelessness. And again, it did not help employee morale to know that the supervisors were "legally" able to smoke during the trips to staff departments, a privilege denied the average employee. Production and quality were only a little better than morale.

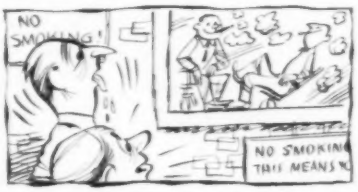
Accordingly, out of conferences between management and employee representatives, the positive action taken to correct a delicate situation was to establish, experimentally, a smoking room on the spare floor. The room consisted of three walls containing glass panes in the upper portions. Around the walls inside the room was a bench, and on the floor was a wooden tray filled with sand.

All spinners and doffers were instructed to use the smoking room only when conditions warranted: namely, during doffer's rest periods and when the frames were running well. Other employees were instructed not to abuse the privilege.

After weeks of careful observation by supervision, the plan was declared successful—not one instance of privilege abuse was reported. What had been considered at one time a trivial problem had zoomed into a major one, and had, in turn, been soon resolved by the full cooperation of everyone concerned. Employee morale soared. Soon every department in the mill had its own smoking room.

Job specialization is becoming more and more apparent today. The trend toward side spinning and roving changes, with a minimum of cleaning duties, has created a problem that sooner or later will become a bottleneck if steps are not taken in advance to prevent it.

When all major cleaning duties are eliminated from a spinner's task, the new task will, in most instances, at least double the sides formerly allotted. The problem arises when there are no spare spinners on hand when a regular spinner is out ill or for some other reason. Production loss from this



" . . . it did not help employee morale to know that the supervisors were able to smoke during the trips to staff departments. . . . "

potential bottleneck will be at least twice as high as the former task would invoke.

Though spinners should be encouraged to accept extra sides in such emergencies, the natural reaction of most spinners is to refuse the extra work even though they could use the extra compensation. The refusal is grounded in the fear than if such a double assignment were executed efficiently the end result would be an increased work load. Naturally, they reason, a regular increased task does not carry increased wages. Exceptionally skilled employees are especially aware of this possibility.

Assurances that no such action will be taken seldom alter the motives which prompted their first refusals. It is a human factor that must be considered, and a factor which should not be held against an employee. Neither should an immediate time-study be made if an employee demonstrates she can handle extra sides in an efficient and skilled manner.

When the spinning department changed to the new tasks, spinners with the least seniority were assigned to jobs created when the major cleaning duties were eliminated from the spinners' new tasks. These cleaning tasks were divided into two categories: top cleaning (from the spinning frame beam up, classified skilled and unskilled according to individual merit which included ability to spin) and bottom cleaning (from the spinning frame beam down, classified as unskilled).

It soon became apparent that many of the former spinners assigned to top cleaning tasks would have to be used on roving spinning assignments to fill in for absent regular spinners. While this pool of reserve spinners lasted there was little likelihood of any serious production bottlenecks occurring.

Nonetheless, supervisors were instructed to encourage all top cleaners who were not former spinners to master additional fundamentals of spinning while on top cleaning assignments. All top cleaners know how to piece ends, at least. A few of the former spinners would not accept cleaners' tasks and resigned.

Mills that have difficulty in training spinners and retaining them will find in their cleaners a great potential source of spinners, and should plan to take advantage of it by making it attractive for a cleaner to learn spinning.

It is better to have an idle cleaning task than to have 20 or more sides stopped when production is vital. Planning will prevent bottlenecks of this type from occurring.

Absenteeism, unfortunately, is and can be a perennial headache. Training and keeping spinners today, especially young ones, presents many problems; but hiring cleaners and gradually bringing them within the spinning ranks, pays off. Some of our best spinners are former cleaners.

Investigating work complaints, charged with the human factor, is the section hand's duty if the spinning frames are involved. But complaints should be called to the attention of the supervisor quickly if the cause is not soon located.

One such complaint quickly led to the establishment of a check system, due to a serious fixer error and lack of supervisory foresight. A spinner was forced to spend so much time on one frame side she neglected the others. The

bottleneck that ensued frayed the spinner's temper to such a point that she herself went in search of the supervisor. The urgency was apparent.

The supervisor quickly went to the frame in question, and noticed that many ends were down and others were breaking down even as he watched. When the supervisor tested one of the running ends with his finger, the end immediately broke down. Sensing the cause at once he stopped the frame to check the gears. Meanwhile, the section hand checked the traveler cups to see if wrong travelers somehow got mixed in, a possible source of an ends-down condition.

The frame had just been changed from a 33s filling yarn to a 48s filling yarn, and the section hand had forgotten to change the twist gear! The system then in force required the section hand to copy on a piece of paper the information required on change-overs. The details were given him by the supervisor.

It can be argued, of course, that the section hand should have recognized the source of trouble at once. The point is, it happened, and a spinner and other employees assisting her were quite upset over it.

This wasn't a recurring problem, and it brought immediate action.

Thereafter, whenever a change was made, the supervisor recorded on a form the pulley, traveler, draft and twist gears, lay gear and pick to be used, plus any additional information required. When the section hand made the change, he also made a final check and check-off, and returned the form to the supervisor.

A good policy to follow is to remember that while not all workers' complaints are acute, prompt action should be taken in all of them and trouble spots eliminated before they become bottlenecks that upset the worker and impair production and quality.

Just how important the human factor is, and how it reflects on quality and production, is well illustrated by the following incident: A spinner, whose work was barely passable and who frequently needed help to get her ends pieced up stopped the overseer one morning and said, "What do you have against me? You never say 'good-morning' to me as you do to some of the others!"

She appeared greatly disturbed. The overseer, naturally taken aback, apologized, spoke for a moment or two with the spinner, assured her his attitude was an oversight, and departed.

Later the overseer realized that while he really had gone by her work for a long time he could not recall ever saying "good-morning" to her. Of course the spinner had sometimes been between frames and he hadn't seen her. But from that time on the overseer made a special point of saying "good-morning" each and every morning.

He wasn't at all surprised when a few weeks later he received reports that her work was vastly improved. The spinner suffered occasional ends-down bottlenecks but not nearly as many as formerly. It is standard procedure in this department now for all supervisors to make it a point to greet the employees each shift. It costs little, but it pays off in big results.

Supervisors, of course, cannot be expected to be psychologists, but a knowledge of human behavior and actions (and reactions) is an important asset to have in the overall drive for high production and high quality.

How to save time in measuring cotton fiber length

■ A VARIATION of the Suter-Webb array method of measuring the length of the fibers in a sample of cotton has been found to provide results which are more valuable in several respects than other methods and to save about 15 per cent of the time required for the usual Suter-Webb procedure.

Called the truncated array method, it utilizes the same equipment as does the Suter-Webb procedure, according to Marketing Research Report No. 217 which was recently published by the U.S.D.A. Agricultural Marketing Service and is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. (price 15 cents).

The report is a summary of the investigation and evaluation of the following techniques and methods for measurement of the length of fibers in a sample of cotton:

1. The "short" Suter-Webb array method;
2. The modified array method;
3. The use of modal length as a length designation value, and
4. The truncated array technique with "cutoff" points of 5/8 inch, 1/2 inch, 3/8 inch, and 1/4 inch.

Procedure. The truncated array procedure is the same as the standard Suter-Webb array procedure except that fibers shorter than 1/2 inch are not arrayed on the black velvet boards, measured, or separated into length groups for weighing, but are lifted from the array machine in one bundle and are weighed.

It may be necessary to array two or three pulls from the 7/16 inch group to be sure all of the fibers which are 1/2 inch long have been removed from the machine and arrayed. These two or three pulls should be added to the other short fibers to be weighed in one bundle.

The values to be calculated are: Percentage of fibers 1/2 inch and longer, mean length, and the coefficient of length variability of these fibers. The coefficient of length variability will be reported as index of length uniformity, to avoid confusion with the standard Suter-Webb array value.

The index of length uniformity is obtained by subtracting the coefficient of length variability from 100. The value obtained expresses the variation in length, from the mean length, in positive terms.

The truncated array technique may be used for all tests for cotton fiber length where the standard Suter-Webb array upper quartile length, mean length, and coefficient of length variability were adequate.

However, for tests where it is necessary to have the weight of the individual fiber length groups for fibers shorter than 1/2 inch in order to calculate desired values, the standard Suter-Webb array procedure must be followed.

Professor John I. Alford, head of Southern Tech's Textile Technology Department, answers a question about the roving frame.

Georgia weaves a new educational fabric

by Robert Hays
Southern Technical Institute

Exclusive

Southern Tech's new two-year course trains men for middle management in southern mills

Photos by Janes

Practice on standard machinery includes wool processes, as well as cotton and synthetics.

SEPTEMBER 23, 1957, marked a step forward in textile education: On that day eighteen students began studying in a two-year program which will lead to their Associate in Science Degrees in Textile Technology at Southern Technical Institute, Chamblee, Ga.

Many textile leaders have been seeking such a program to supply the third "M" of markets, materials, and manpower. In none of the five southern textile-concentration states has industry pressed so earnestly for its own technical-college program as it has in Georgia. Georgia's 180-plus mills employ well over 105,000. As the

state's largest industry—leading in employment by two and one half times the next largest—textile manufacturing can employ perhaps 5000 technicians in Georgia alone. Each of the Carolinas, with even larger total textile payrolls, should employ at least that many more.

Southern Tech's new program will supply some of these thousands by a concentrated program in textile technology. The graduates will be the middle management of the mills: the foremen, supervisors, department heads, staff specialists, salesmen, and lab technicians. They will provide, too, a reserve of manpower for future openings in top management.

John I. Alford, Head of the Textile Technology Department, points out that his program will open up careers to youngsters all over the South—careers hitherto closed to those who just didn't have enough experience or education. Himself a veteran of thirty years' management in textiles, Professor Alford promises: "The young men—and we hope soon young women—in my class today will, some of them, at least, be in top positions in the mill offices of the South two decades from now."

PROFESSOR ALFORD likes to explain in textile terms how the fabric of Southern Tech's program will be woven. "The warp," he says, "will be basic college subjects. These include four quarters of English, three quarters of physics, and two quarters of math. We may add a quarter of drawing later. These courses are standard warp at Southern Tech, courses taken by students in the other ten degree programs.

"Southern Tech," continues Professor Alford, "isn't a trade school. We aren't training doffers, spinners, fixers, or any people for any of the individual jobs. We want these youngsters to have some breadth, some flexibility, so that they can see the larger picture of mill operation.

"On the other hand, the industry demands that the graduate know mill operation. We aren't just going to take the graduating seniors on a tour of a nearby mill and then hand them a degree which reads 'Textile Technician.' The filling of our program is thoroughly planned too, with plenty of practical textile experience."

The textile students begin both warp and filling at Southern Tech's loom the first quarter. For example, the eighteen young men began their math the day after they registered. They also began their first textile courses: raw materials, opening, picking, and carding. Each succeeding quarter they will move closer to their two-year degrees, with courses in weaving, designing, dyeing and finishing, and textile fabrics.

Textile courses include both lecture and laboratory courses. Professor Alford teaches his lecture courses on the Chamblee campus of Southern Tech.

To offer practical application of what he discusses, Professor Alford goes to the downtown campus of Georgia Tech. In the $2 million A. French Textile School the students can perform almost every operation they will meet on mill jobs.

LOW COST is one of the greatest advantages of the new Southern Tech program. Director L. V. Johnson of Southern Tech has figures which show that education comes high; Mr. Johnson estimates that the average parent must spend more than one thousand dollars per year to keep a son or daughter in college. Multiplying that by four requires four thousand (and Mr. Johnson says this is a conservative guess). During the four years a parent keeps his boy or girl in college, the youngster is red ink on the family budget at least nine months a year.

The Southern Tech program cuts the four thousand figure at least by half. Southern Tech is tuition-free for residents of Georgia—they pay only the $90-per-quarter matriculation, medical, and student-activity fees. Even residents of other states pay only $95 per quarter tuition. Thus a resident of Georgia can come to college for about $1 per day and the nonresident about $2 per day. Board and room and books are up to the student, but Southern Tech has low-cost dormitory and dining hall facilities ($165 per three-month quarter).

And since the Southern Tech student can finish in two years—two college years (eighteen months or six quarters)—instead of the traditional four years, the cost is cut by at least 50 per cent. Southern Tech operates four quarters a year for those who want to speed up their programs.

The second selling point is the concentration of the program. The textile students average nearly twenty hours of credit course work each quarter. Students in many four-year colleges average only sixteen hours.

The courses themselves fit the needs of students. Careful curriculum planning has whittled off many college courses which, however desirable, do not answer the needs of young men in a hurry. Southern Tech offers no literature course and no R.O.T.C.

A THIRD ADVANTAGE lies in the leadership courses the student must take. Like all Southern Techsters the textile students must absorb a quarter's instruction in human relations. For textile students there's another quarter in supervisory training, another in quality control, and still another in production control—all basic tools of alert management.

Next on the planning board will be a cooperative training program in textile technology. More than twenty mill executives have already said they were willing to set up work-a-quarter, study-a-quarter schedules. Principal advantage of a co-op program should be financial support for youngsters who might not otherwise find a seat in a college classroom. But the co-op program won't be charity. Mills which participate will be grooming future bosses, giving them baptism in workaday mill operations. In addition, a co-op program will offer a student a valuable maturing period for future supervision.

Entrance into the program, co-op or otherwise, will require high-school graduation. Also, a student who registers must have taken two years of high school algebra. (If he hasn't, he can take noncredit, remedial work at Southern Tech.)

The effects of degree of opening on mill wastes and yarn quality

HOW MUCH OPENING?

by J. C. Hubbard
and J. S. Graham
School of Textiles
Clemson College
Exclusive

A RECENT investigation of the effect of various degrees of opening and cleaning conducted at Clemson College indicates that when opening and cleaning compressed bales of California SLM cotton with conventional opening and cleaning machinery, the number of opening and cleaning processes used is rather critical.

Although nep count seems to increase with degree of opening and cleaning, the rate of increase is not great for tests using not more than two openers. With the addition of a third opener, the nep count rose sharply.

All things considered, the use of one vertical opener and one No. 12 opener seems to give the best results. The per cent lint loss, the per cent nonuniformity, the loading of card fillet, and the foreign matter in card sliver are all at a minimum in this test as compared with the other tests run. However, the number of neps in the card web is somewhat higher in this test than in tests where less opening was used.

Nothing was gained by the addition of more of the same type opening and cleaning processes (feeder, No. 12 opener, and No. 11 filter). In fact, definite signs of damage are in evidence due to repeat runs through these machines.

Over Beating Creates Neps. In recent years some mills have eliminated one or more beaters from their opening and picking lines to obtain a lower nep count at the card, which in many instances resulted in improved yarn appearance. This experiment was conducted in an attempt to throw more light on the subject of optimum use of the vertical opener and the Saco-Lowell No. 12 horizontal opener.

Thirty to forty pounds of cotton were used for each test, thus permitting a nearly normal card stripping interval. The scope of this paper is somewhat limited in that the cotton used consisted of one compressed bale of California SLM Acala, having a Micronaire reading of 4.3.

Using the Saco-Lowell opening equipment available in the Clemson Textile School, five different opening lines were formed and are shown below with the machines listed in the order of processing. The five tests are numbered in a sequence which denotes the degree of opening apparently accomplished by the corresponding series

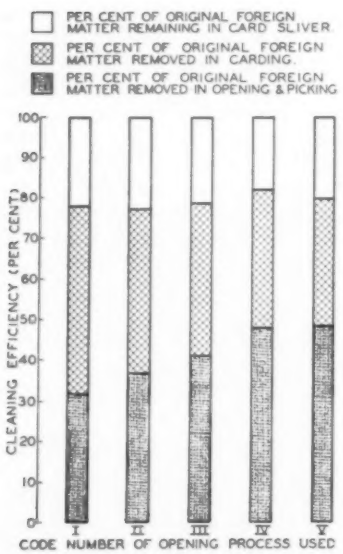

PER CENT OF ORIGINAL FOREIGN MATTER REMAINING IN CARD SLIVER.
PER CENT OF ORIGINAL FOREIGN MATTER REMOVED IN CARDING.
PER CENT OF ORIGINAL FOREIGN MATTER REMOVED IN OPENING & PICKING
CLEANING EFFICIENCY (PER CENT)
CODE NUMBER OF OPENING PROCESS USED

Fig. 1. Effect of various opening processes on the total cleaning.

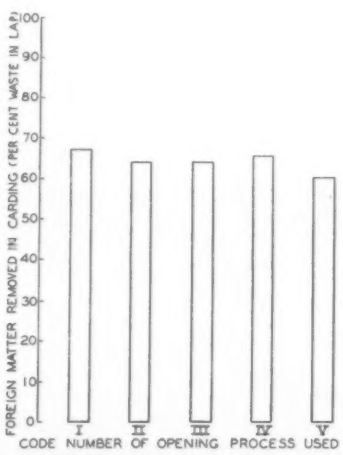


Fig. 2. Effect of various opening and cleaning processes on percentage of lap foreign matter removed in carding.

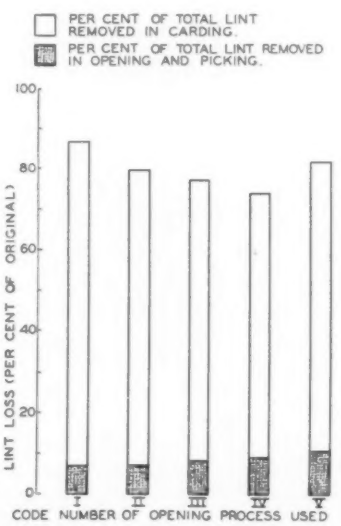

PER CENT OF TOTAL LINT REMOVED IN CARDING.
PER CENT OF TOTAL LINT REMOVED IN OPENING AND PICKING.
LINT LOSS (PER CENT OF ORIGINAL)
CODE NUMBER OF OPENING PROCESS USED

Fig. 3. Lint loss in opening, picking, and carding.

of opening machines in the opening line.

Test I

Blending Feeder, No. 11 Filter

Test II

Blending Feeder, No. 12 Opener, No. 11 Filter

Test III

Blending Feeder, Vertical Opener, No. 11 Filter

Test IV

Blending Feeder, Vertical Opener, No. 12 Opener, No. 11 Filter

Test V

Blending Feeder, Vertical Opener, No. 12 Opener, No. 11 Filter, Blending Feeder, No. 12 Opener, No. 11 Filter.

After opening and cleaning all tests were treated alike in the subsequent yarn manufacturing processes which were as follows:

Saco-Lowell Picker C-6—with three-blade back beater and Kirschner front beater
Whitin Model L Card
Saco-Lowell Lap Winder
Saco-Lowell Control Draft Drawing
Whitin 11 x 5½ Slubber
H & B Casablanca Spinning

Sheeting Mill Organization Used. Insofar as it was practical, the organization used is parallel to that used in one of the larger sheeting mills. Some of these specifications are listed below.

Picker lap—12½ oz
Card sliver—53 gr at 11¼ lb/hr (licker-in speed 395 rpm, cylinder speed 160 rpm)
Lap winder—lap 840 gr
Drawing sliver—50 gr
Roving—1.50 Hk
Spinning—22s warp

Analysis was made on all waste from the feeder through the card, using a Shirley Analyzer. Nep counts were taken on the card web. Brush evenness tests were run on card sliver, drawing sliver, roving, and yarn. The yarn was also examined for size, skein strength, and single strand strength.

Results. Each additional opening process removed slightly more foreign matter and there was some lint loss in each process. (See Table I and Figure 1.)

Carding efficiency was the highest when the lap was the dirtiest. (See Table II and Figure 2.) Clean-

TABLE I Shirley Analyzer Tests of Opening and Picking Waste (Per Cent of Weight Fed to Feeder)

Test No.	I			II			III			IV			V		
	Lint Loss %	Foreign Matter %	Gross Waste %	Lint Loss %	Foreign Matter %	Gross Waste %	Lint Loss %	Foreign Matter %	Gross Waste %	Lint Loss %	Foreign Matter %	Gross Waste %	Lint Loss %	Foreign Matter %	Gross Waste %
Blending Feeder	.580[1]	.144	1.29	.580[1]	.122	.50	.580[1]	.109	.40	.580[1]	.084	.68	.580[1]	.163[2]	.652
Vertical Opener							.146	.364	.51	.163	.347	.51	.186	.394	.58
No. 12 Opener				.029	.231	.26				.045	.230	.25	.128	.382[2]	.512
Back Beater	.038	.402	.44	.052	.348	.40	.035	.325	.36	.046	.284	.33	.070	.240	.31
Blending Reserve	.022	.188	.21	.021	.119	.14	.018	.102	.12	.018	.082	.10	.021	.059	.08
Front Beater	.037	.373	.41	.030	.290	.32	.026	.254	.28	.023	.207	.23	.032	.188	.22
Total Visible Waste	.677	1.107	2.35	.712	1.110	1.62	.805	1.154	1.67	.875	1.234	2.10	1.017	1.426	2.35
Invisible Waste		.306[3]			.538[3]			.681[3]			.908[3]			.739[3]	
Total Waste	.677	1.413	2.35	.712	1.648	1.62	.805	1.835	1.67	.875	2.142	2.10	1.017	2.165	2.35
Lint Loss[4]		.71			.74			.84			.92			1.06	
Cleaning Efficiency[5]		31.7			37.0			41.1			48.0			48.5	

1Average lint loss for all tests
2Composite results for two passes through the process
3Estimated from average total waste and actual foreign matter content
4Per cent of lint fed — lint = 95.54 per cent of total weight fed
5Per cent of foreign matter removed — foreign matter = 4.46 per cent of total weight fed

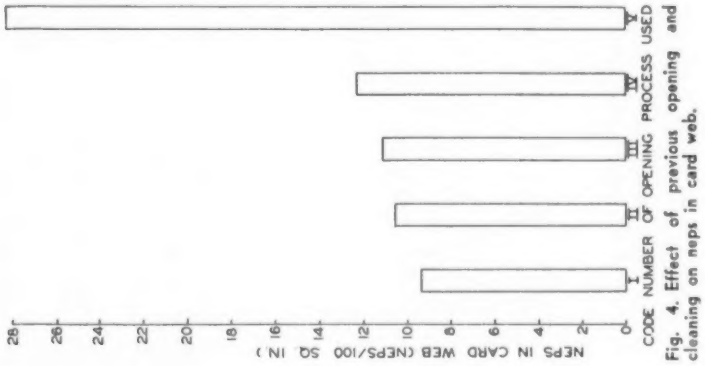


Fig. 4. Effect of previous opening and cleaning on neps in card web.

ing at the card did not completely make up for lack of cleaning in the opening and picking, however it very nearly did. (See Figure 1 and Table III.) The total cleaning efficiency for all five tests ranges from only 78% to 82%.

The per cent of total lint found in the card waste and also the total lint loss was greater for the less opened cotton, except in Test V, which passed through the most opening processes. (See Figure 3 and Table IV.) This may indicate that with the application of the additional opening processes in this test, the point of optimum opening was passed and that the cotton fiber masses were rolled, "ratted," or otherwise bunched and matted together instead of being better opened.

The card web nep count increased with the increase in the number of opening processes applied (see Figure 4). This trend upward in the nep count seems about linear through Test IV, the increase for Tests I through Test IV being only about 18% (see Figure 4). In Test V the nep count increased 130% over the nep count for Test IV.

TABLE II

Shirley Analyzer Tests of Card Waste (Per Cent of Weight Fed to Card)

Test No.	I			II			III			IV			V		
	Lint Loss %	Foreign[1] Matter %	Gross Waste %	Lint Loss %	Foreign[1] Matter %	Gross Waste %	Lint Loss %	Foreign[1] Matter %	Gross Waste %	Lint Loss %	Foreign[1] Matter %	Gross Waste %	Lint Loss %	Foreign[1] Matter %	Gross Waste %
Licker-In Motes & Fly	1.278	1.052	2.33	1.092	.959	2.05	1.072	.888	1.96	1.046	.714	1.76	1.248	.622	1.87
Cylinder Motes & Fly	.536	.244	.78	.520	.160	.68	.587	.173	.76	.389	.141	.53	.444	.156	.60
Flat Strips	4.823	.504	5.33	4.558	.492	5.05	4.202	.428	4.63	3.936	.454	4.39	4.523	.437	4.96
Cylinder Strips	1.096	.234	1.33	.858	.172	1.03	.811	.169	.98	.917	.183	1.10	.734	.156	.89
Doffer Strips	.109	.021	.13	.0427	.007	.05	.095	.015	.11	.106	.024	.13	.088	.012	.10
Total Analyzed Waste	7.842	2.055	9.90	7.071	1.790	8.86	6.767	1.673	8.44	6.394	1.516	7.91	7.037	1.383	8.42
Invisible and Unclassified Waste		.90			.81			.66			.74			.63	
Lint Loss[2]		8.09			7.29			6.96			6.55			7.19	
Foreign Matter Removed[3]		67.49			63.70			63.78			65.46			60.31	

1Shirley visible foreign matter plus Shirley invisible loss
2Per cent of lint fed to card
3Per cent of foreign matter fed to card

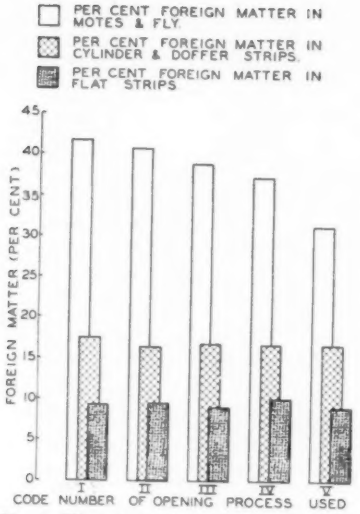


Fig. 5. Effect of previous opening and cleaning on foreign matter in card web.

Opening and cleaning reduce foreign matter in card motes and fly. Figure 5 shows a comparison of per cent foreign matter in each of the following: flat strips, cylinder and doffer strips, and card motes. With increasing opening and cleaning there is a trend toward reduced foreign matter in the motes and fly under the card licker-in and cylinder. This trend is not so pronounced for other forms of card waste.

Lack of opening causes slight increase in nonuniformity. Evenness test data are shown in Table V. Test I, the least opened, showed a slightly significant increase in per cent nonuniformity by the Brush Uniformity Analyzer. This held for card sliver, roving, and yarn. This unevenness of yarn made from less opened cotton also shows up in yarn size by skein weight. The per cent C V in yarn size is significantly higher for Test I.

Table VI shows yarn skein strength and yarn single strand strengths. There is no correlation of yarn strength or strength variability with degree of opening for either skeins or for single end tests.

The range of yarn board appearance was only half a grade with Test IV, one vertical and one No. 12 Opener, giving grade C+. The other yarns were grade C.

Acknowledgment

The authors wish to express thanks to members of the Clemson Textile School staff, J. H. Marvin and J. L. Thompson, for assistance with the experimental work.

TABLE III

Total Cleaning Efficiency for all Processes through Carding

(% of Foreign Matter in Raw Stock)

Test No.	I	II	III	IV	V
Total Foreign Matter Removed, %*	77.8	77.1	78.6	82.0	79.5

*Includes Shirley Analyzer invisible loss.

TABLE IV

Total Lint Loss in Opening, Picking and Carding

(% of Original Lint)

Test No.	I	II	III	IV	V
Total Lint Loss, %	8.74	7.98	7.74	7.41	8.17

TABLE V

Evenness

Test No.	Card Sliver			Drawing Sliver			Roving			Yarn		
	N.U. %	S.D. %	C.V. %	N.U. %	S.D. %	C.V. %	N.U. %	S.D. %	C.V. %	N.U. %	S.D. %	C.V. %
I	12.07	1.45	12.0	7.23	1.57	21.7	11.91	2.53	21.2	137.7	4.39	3.19
II	10.85	1.60	14.7	7.52	1.19	15.8	9.93	1.30	13.1	135.5	5.60	4.13
III	11.72	0.85	7.3	6.95	1.22	17.6	10.32	1.27	12.3	134.5	2.24	1.67
IV	9.48	2.00	21.1	8.05	1.43	17.8	10.90	1.51	13.9	132.3	6.84	5.17
V	9.70	1.41	14.5	7.27	1.09	15.0	11.48	1.70	14.8	135.6	2.03	1.50

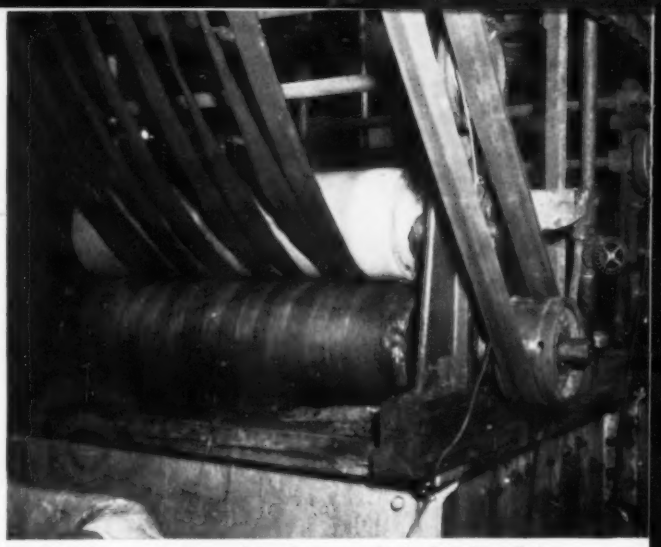
TABLE VI

Yarn Count and Strength

Test No.	Size Yarn			Single Strand				Skein			
	Count No.	S.D. No.	C.V. %	Str. gm.	S.D gm.	C.V. %	Count/Str. Product No./gm.	Str. lb.	S.D. lb.	C.V. %	Count/Str. Product No./lb.
I	22.1	1.08	4.9	434	50.5	11.6	9591	107	3.51	3.29	2360
II	21.1	0.55	2.6	450	55.9	12.4	9495	111	3.61	3.24	2449
III	21.6	0.46	2.1	437	55.0	12.6	9439	110	4.28	3.89	2374
IV	22.8	0.53	2.3	421	53.5	12.7	9599	106	4.00	3.78	2406
V	22.2	0.77	3.5	448	45.5	10.2	9946	112	6.96	6.22	2475

They keep awning quality headed up

Mill's program continually up-grades awning quality and improves weather durability



Thorough dye penetration and levelness are obtained in long-chain dyeing, with as many as four passages required for heavy vat shades. Mineral dyes—mostly for tans, buffs, grays, and yellows—are applied both by the long-chain method and by continuous piece dyeing.

Staff prepared Exclusive

ASIDE from offering protection from the weather over a prolonged period of time, an awning must retain much of its original aesthetic appeal if it is to meet with complete consumer satisfaction. The properties that enable a cotton awning to withstand prolonged weather exposure are not inherent in the raw material; for the most part, they must be acquired through proper processing and chemical finishing techniques. Similarly, the achievement of the ultimate in color fastness of a variety of shades, many of which are characterized by brightness and depth, calls for experience in color formulation and application.

As part of a program to continually up-grade awning quality and improve weather durability, The Falls Co., Norwich, Conn., manufacturers of awnings marketed under the Otis brand name, periodically reappraises its dyeing and finishing operations and carries on a quality control and development program as well. Some of the projects initiated, when the program got under way several years ago, were long range in character and not designed to bring in overnight results. Many, however, concentrated on the smaller, day-to-day problems common to all manufacturing and wet-processing operations. These called for persistent, routine investigations and eventually pointed to the need for a quality control program. In particular, dyeing and application of mildew-inhibiting agents and water repellents came under closer control.

Perhaps one of the most notable examples of major projects that have now reached completion was the development of a continuous piece dyeing range for the application of mineral dyes.

A TYPICAL awning fabric manufactured by The Falls Co. is woven of 12s 2-ply warp yarns, and 16s 2-ply filling yarns, to make a 70 x 35 fabric, 31″ wide, running 10 oz/yd. The sequence of operations varies somewhat; depending on whether bleaching takes place, on method of dyeing, whether in the yarn or in the piece, and the like. In a striped awning fabric, slashing (to be discussed later) follows dyeing; in an all-white awning fabric or one that is to be dyed in the piece with mineral dyes, slashing follows warping.

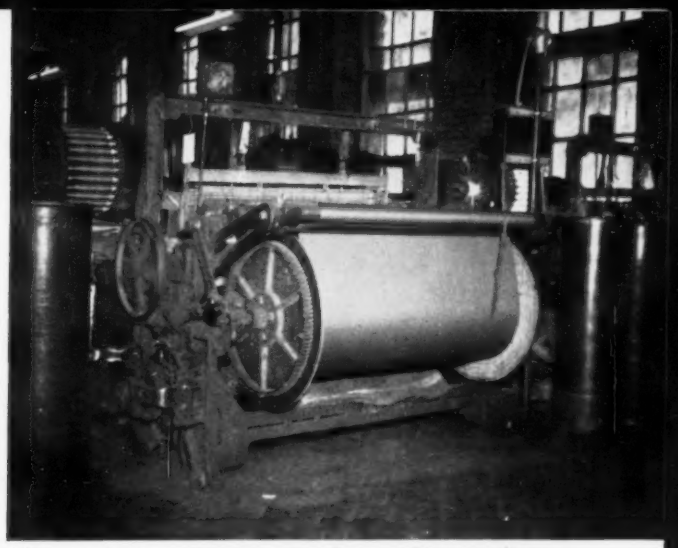
To produce the wide variety of shades that the awning field demands, The Falls Co. uses selected vats, which are applied only on yarn—by the long chain dyeing method—and mineral dyes applied also to yarn by the same method, and to the piece on a continuous dyeing range. There is no continuous vat dyeing; management feels that even though the long-chain dyeing method is more costly, requiring up to four passages, color fastness is superior to piece dyeing, because of increased penetration. This method of dyeing is known, too, for the levelness of shade that it produces on large quantities of yarn.

THE LONG-CHAIN dyeing machine at The Falls Co. consists of six compartments, or boxes, each equipped with individual rubber squeeze rolls. The previously scoured and undried yarn first enters what is known as a "prime" or "sweetening" bath containing caustic and hydro. The next two boxes contain reduced dye, followed by a booster box, where leveling action takes place

In the last two compartments the yarn is rinsed in large quantities of water, squeezed, and plaited into a truck. This operation is repeated two or three times, depending on depth of shade desired and on dyes used. The dyed lot is then given a final passage through the unit which now contains bichromate of soda—to insure thorough oxidation of dye—and acetic acid in a subsequent box to neutralize traces of alkali; and finally soap and rinse water in the remaining boxes to remove excess dye.

There are three long-chain dyeing ranges: one for dyeing minerals (used mostly for tans, greys, browns, and yellows), one for light

Although size pick-up is low, The Falls Co. considers slashing to be essential for quality weaving. The fabrics are thoroughly desized to prevent mildew growth. For striped awnings, slashing follows dyeing; for white or piece-dyed awnings, it follows warping.



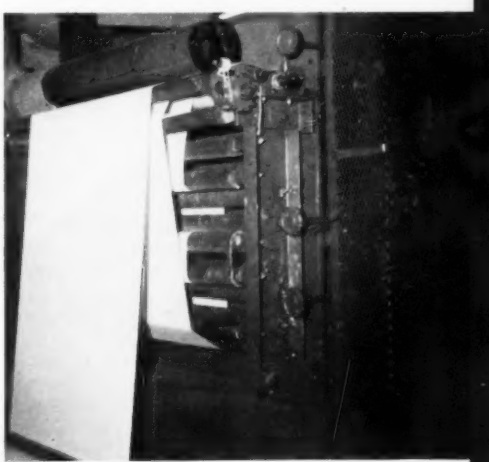
The severe beating-up necessary to produce a tight weave places a heavy strain on loom parts and adjustments, requiring close inspection and maintenance of equipment to assure quality and top production. A typical construction is 70 x 35, of coarse two-ply yarns.

and bright vat shades, and a third for dark vat shades. The vat dyeing units are equipped with automatic temperature controls and reduction potential measuring instruments. In addition, there is a continuous dyeing range, already mentioned, for the application of mineral colorants in the piece.

Successful long-chain dyeing requires a thorough knowledge of color fastness data and dye properties with close supervision in application. At The Falls Co. the dyehouse is assisted by the laboratory not only in the development of dye formulas but in solving the day-to-day problems of processing.

FOLLOWING DYEING, the yarn is dried on a stack of cans and beamed in preparation for slashing and weaving. Although slashing is light, with a low pick-up of size, it is found to improve weaving. Only a minimum of tension on the yarn is allowed in order to avoid stretching; as a matter of fact, all wet-processing is carried out without tension on yarn or fabric to produce a dimensionally stable awning, having a shrinkage less than 2%.

Weaving is done on Draper X and X-2 looms of which there are 120 and 24 in number, respectively. To maintain high production



The brushing operation removes such defects as loose ends, knots, and fiber lumps that would readily show up during hand inspection.

Chief chemist Ray Murray checks fabric in Weather-Ometer.

Awning fabrics are carefully hand-inspected before they are shipped.

Wool evaluating methods and discoloration studied

■ LABORATORY testing and sampling methods for evaluating wool are discussed in a new publication issued by the U. S. Department of Agriculture.

These objective methods for determining wool grade, yield, and staple length with the actual wool top resulting from the processing of the grease wool are compared in the report. Visual appraisal methods are also compared with the results of laboratory testing and with the resulting actual product.

Included in the study are data resulting from the sampling, testing, and mill processing of 46 lots of wool, totaling 607,000 lb.

Some of the conclusions reached were:

1. Coring with a 1¼-inch cutting edge provided the best sample for determining yield; that this method of determining yield proved more accurate than visual appraisal or testing core samples of larger or smaller cutting edges; there appeared to be no appreciable difference between end or side core sampling patterns.

2. Better methods are needed to sample for the determination of moisture content in commercially scoured wool.

3. Reasonably accurate estimates of average staple length, and the range of staple lengths within a graded lot, can be obtained by using the measurement techniques described.

4. As the average diameter of the wool becomes coarser, the average number of crimps per inch becomes fewer; but crimp is not always a criterion of the absolute degree of fineness.

5. In comparing Noble and French combing, there appeared to be no appreciable difference in fineness and yield, but data suggested that Noble combing produced a slightly longer top.

6. There were indications that one mill produced a longer top than did other mills included in the study and that there were differences between the mills in the amount of top yield.

7. There was a good deal of variation in estimates made by the industry appraisal committee on the characteristics of noilage or wastiness, soundness, condition, and color and character; a need for more objective measurements of these characteristics was indicated.

Single copies of the 67-page report, entitled "Value-Determining Physical Properties and Characteristics of Domestic Wools" (Marketing Research Report No. 211), may be obtained free from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

Discoloration in Wool. Economic effects of varying degrees of color in domestic wools have been measured by the U. S. Department of Agriculture. Researchers of the Agricultural Marketing Service in cooperation with wool technologists of the Western Utilization Research Laboratory prepared a report, which was issued recently, giving results of a survey in which over 50 firms participated. Their 123 establishments use more than half the wool processed in the United States.

The amount that wool is discounted for color was determined from buyers and industrial users of wool by appraisals of wool samples displayed under glass in a color comparator unit.

The color scale in the comparator depicted five levels of color intensity. Colors were arrayed from light to dark. "A," the lightest, was used as a standard, and wools with greater amounts of color were discounted a percentage of the price of "A" wool. Experienced wool dealers made their judgments of discounts for the five different levels of color.

The average discount for wool of Color C was 3.3 per cent for fine wool, 3.5 per cent for medium wool, and 3.7 per cent for quarter-blood wool. Color "E" was discounted as much as 6.9 per cent for fine wools, 7.4 per cent for medium wools, and 6.8 per cent for quarter-blood wools.

A free copy of "Economic Evaluation of Color in Domestic Wool" (Marketing Research Report No. 204), is also available upon request to the U.S.D.A. Office of Information.

and good quality weaving, close inspection and continual maintenance are required, for much strain is placed on loom adjustments and parts when weaving the tight awning fabric.

The fabric is then given a brushing operation to remove knots and fiber lumps, loose ends, and other defects that would readily show up on hand inspection.

Although size pick-up is low, desizing is essential and must be thorough; for the starch product used as sizing agent, if allowed to remain in the fabric, would readily promote mildew growth during weather exposure. This operation consists of a six-hour lie in an enzyme, followed by thorough rinsing and drying.

THE TWO PROPERTIES that contribute most to weather durability of an awning are its ability to repel water and to resist mildew growth And laboratory and plant evaluation of new products is constantly carried out to develop new formulations and processing techniques to increase weather resistance ratings. A selected and properly formulated mildew inhibitor is applied first. The fabric is impregnated, uniformly squeezed, and dried. The water-repellent, a wax-type emulsion, is then applied in a similar manner and is the final operation.

Inspection of the awning fabric, done on both sides, is by hand. Although machine inspection would be less costly, management is reluctant to give up the hand inspection method, which is much more thorough.

Before the goods are shipped, tests on representative samples of production lots are carried out in the laboratory. The more important of these include the following:

1. A 14-day soil burial test, which determines the mildew-inhibiting property of the awning by a measurement of warp and filling strength before and after soil burial.

2. Leaching test, which determines how long the water-repellent will remain on the fabric.

3. Shrinkage test—fabrics cannot shrink over 2%.

4. Weather-Ometer test, which measures over-all resistance of fabric to changing weather conditions that will be encountered.

5. Fade-Ometer test, which determines how long dye shades will withstand sunlight before appreciably fading.

6 Spray and hydrostatic ratings of water-repellency.

Although its present line of awnings and outdoor fabrics is manufactured of cotton, synthetic fibers are constantly evaluated under The Falls Co. program to improve awning quality and weather durability properties.

Hightower—Opening address

Bradshaw—Carding

Hertwig—Spinning

Georgia mill report on SRRL opener

Ring preference and experience with anti-friction spindles were also given

Staff report

AT THEIR annual spring meeting the Textile Operating Executives of Georgia closed their discussions of mutual problems in opening, picking, carding, spinning, spooling, and warping by electing *Charles Pease,* superintendent of Columbus (Ga.) Mfg. Co., to the executive committee. He now fills the vacancy created by the retirement of *Charles E. Rich*, manager of the Milstead, Ga., plant of Callaway Mills Co. More than 200 executives attended.

George Hightower, vice-president, Thomaston (Ga.) Mills, gave the opening address. *J. A. Bradshaw*, superintendent, Fulton Bag and Cotton Mills, Atlanta, Ga., led the carding discussion; *E. J. Hertwig,* superintendent, Porterdale, Ga., plant of Bibb Mfg. Co., led the spinning discussion.

S.R.R.L. Openers. On the agenda was a multipart question dealing with S.R.R.L. openers. The replies from the various plants, taking each part of the question in turn, are:

State your experience with the S.R.R.L. opener.*

Mill I installed one eight months ago and is quite satisfied with the results. The unit has required no maintenance and does an excellent job of opening and cleaning.

Mill J only recently installed two of the openers, one in each opening line, and to date has not compared performances (in such areas as nep count and tensile strength) with previous averages.

Mill K being dissatisfied with blending results, installed two units in 1954—the first in April, the second in November.

Mill L made a test installation of the opener.

Mill M has one opener line operating with the opening and cleaning unit.

Mill S reports highly satisfactory experience in using the opener on low grade stock. The unit has enabled the plant to lower the grade of cotton processed, but still to deliver end products as good as those of pre-S.R.R.L. days. The plant states that the unit does not do the best of cleaning, but is valuable for its blending abilities, and that it opens the stock so much that subsequent cleaning operations are more successful. The mill is operating on a mix containing 40% waste.

(a) What machine is used to supply it, and what type of machine does it supply?

Mill B drops the stock from hoppers onto a blending feed table, whence it passes to the S.R.R.L. unit. Stock from the latter unit passes to an inclined, six-beater cleaner.

Mill I supplies the opening unit from pre-openers and hoppers and passes the stock from the unit to three pickers.

Mill J feeds the S.R.R.L. opener from hopper feeders, six to a line, which are equipped with pre-openers and cleaner. The cotton

*This question refers to the SRRL opener which has been commercially available for several years. A recent development reported by the U.S.D.A. Southern Regional Research Laboratory is the SRRL opener-cleaner (see TI for April, 1958, page 145), a unit which has now been placed on the market. The editors assume that this is the "opening and cleaning unit" mentioned by Mill M.

from the hopper goes directly to a Gyrator and distributor at the back of the pickers.

Mill K has an opener line consisting of eight feeders and one waste feeder. A pre-opener is placed in front of each feeder. From the pre-openers the cotton drops onto a feed table and thence to the opener from which it is drawn by a separator in the picker room.

Mill L supplies the opener from feeder hoppers and sends the stock from the opener through Gyrators to the pickers.

Mill M feeds the opener from four bale breakers. The stock is then sent through a No. 11 cleaner over a No. 12 opener.

Mill S feeds the S.R.R.L. opener from ten blending feeder hoppers and one No. 11 dust extractor. The stock from the opener goes to a No. 11 over No. 12 combination.

(b) Gain or loss in tensile strength and nep count?

Mill B has no specific test reports to discuss, but feels that the yarn tensile strength has not suffered, that more pepper trash is removed by the opener's action, and that card web appearance has improved.

Mill I made other changes in opening at the time the S.R.R.L. unit was installed, and, although nep count is down, cannot attribute the improvement to the presence of the new opener. No appreciable change has been noted in tensile strength. The opening room changes, coincident with the opener installation, included pre-openers and hoppers.

Mill J has no test results to report.

Mill K noted no change in tensile strength or in nep count.

Mill L gives the following information:

	SRRL	Regular
Break factor (skein)	2183	2092
Break factor (single end)	199	303
Neps/100 sq in web	52.5	46.5

Mill M has not conducted tests on these factors.

Mill S reports a 50-point gain in break factor, but has not made an exhaustive study on nep count.

(c) Type of bales processed—flat or compressed?

Mill L uses only flat bales. All the other plants use both.

(d) Pounds per hour processed through one unit?

Mill B reports that the amount (800 lb) used is all that the plant requires, and notes that the unit is capable of far greater output; *Mill I*, 1200; *Mill J*, 1200; *Mill K*, 2000; *Mill L*, 1320; *Mill M*, 1300 to 1400; *Mill S*, approximately 1300.

SPINNING

Anti-friction Spindles. Several plants replied to the question:

Please give your experience with anti-friction type spindles using a rubber mount.

Mill A: Experience to date not too satisfactory. *Mill K:* Satisfactory results from the 42 frames so equipped. *Mill U:* Running 120 frames using rubber-mounted anti-friction spindles. In the beginning the spindles worked out of plumb rather easily, so a torque wrench, set at 120 inch-pounds, was adopted in tightening the spindles. The problem at present is keeping those rubber washers replaced which deteriorate under oil attack. The lubricant migrates from the lifter rods, which in this instance must be oiled.

(a) With no doff guard and the straight lift, have you had any problems lifting the bobbins off the spindles?

One mill reports a definite affirmative. Another reports an affirmative but gives the correction —paraffin. This compound is applied to the tips of the spindles. Still another plant answers "no" and attributes the lack of trouble to the use of paraffin. Two plants answer with unqualified "noes."

(b) Have you had trouble with spindles being pulled out of plumb as a result of stuck bobbins?

Mill A had trouble with the first models installed, and has no experience to report on the later types. *Mill B* finds it necessary to plumb spindles on a three-month schedule, compared to the twelve-month schedules on other types. *Mill O* is not bothered with that difficulty. *Mill R* had such trouble as long as the original rubber mounts were in use. After changing to a different mount the plant now reports results "very satisfactory." *Mill U* also reports that difficulty.

Spinning Rings. Eighteen mills replied to the following:

What range of spinning numbers do you run on No. 1 and No. 2 flange rings? What is your recommended flange size for a yarn number range?

At *Mill A* yarns from 3s to 26s are run on No. 2 flange: 26s filling is run on No. 1 flange. The firm hesitates to recommend flange sizes—too many variables. *Mill B*, producing 3s to 26s, uses No. 2 flange exclusively.

On counts of 25s and above, *Mill C* uses a No. 1 flange. *Mill E* uses No. 2 flanges on yarns up to 30s, but feels that better results could be obtained with No. 1 flanges when the yarn is finer than 14s.

Yarns from 5s to 12s are spun with the No. 1 flange at *Mill F*. *Mill G* runs all warp yarns (4s to 30s, 2½" rings) and all filling yarns (4s to 20s, 1⅝" rings) on No. 2 flanges, but holds the theory that better results could be obtained if No. 1 flanges were used on 20s yarns or finer.

At *Mill H* No. 2 flanges are used on all yarns (2s to 14s). *Mill I* has only No. 2 flange rings. The 2.50s to 16s yarns at *Mill J* are spun on No. 2 flanges. While holding the belief that the more desirable situation would be to run numbers finer than 24s on No. 1 flanges, *Mill K* uses No. 2 flanges for its entire yarn range of 3.5s to 36s.

Mill L runs all numbers, 10s to 43s, on No. 1 flanges. *Mill M* produces its entire range of 2s to 12s on No. 2 flanges.

The No. 1 flanges at *Mill N* produce 26s to 31s warp and 35s and 41s filling. *Mill O* finds the No. 1 is satisfactory for all counts from 48s to 110s.

Mill Q is running 23s to 42s on No. 1 flanges, and believes that the same flanges would be satisfactory on counts coarser than 20s.

Mill R spins 6s to 20s on No. 2 flanges, and has one frame equipped with No. 1 flanges producing 14.5s. *Mill S* is producing 6s to 22s filling yarns, and 8s to 18s warp yarns on No. 2 flanges. *Mill U* runs 3s to 30s on No. 2 flanges.

Fig. 1. A simple method for marking off a repeat of the design into squares corresponding to those of the design paper is to mark the width of the repeat on a separate slip of paper, lay it diagonally on the design paper, and then mark off the required number of divisions on the strip—"parallel lines intercept equal segments of a straight line."

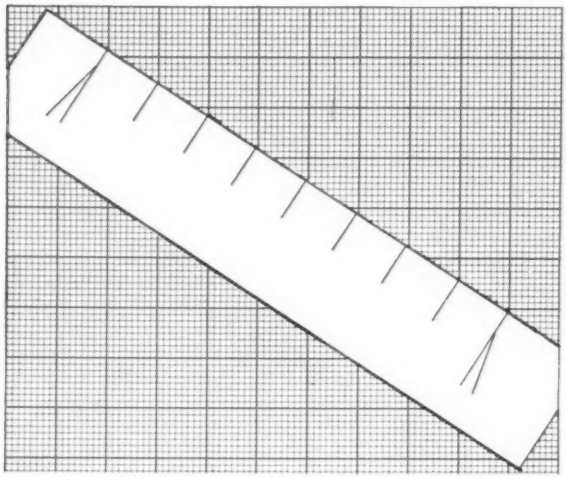
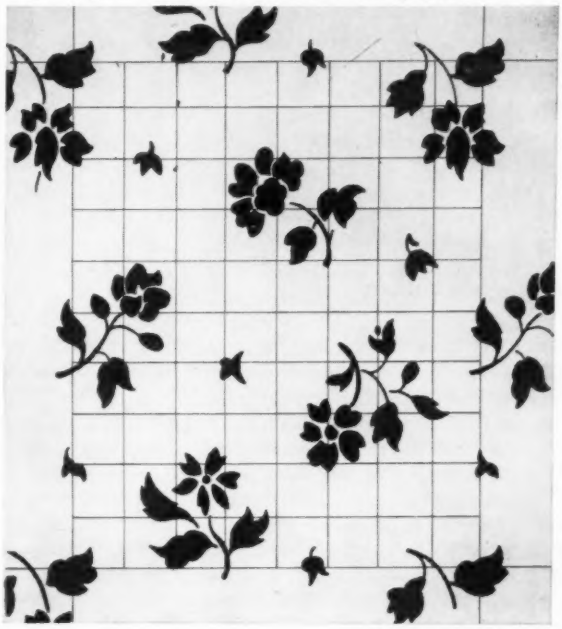


Fig. 2. The slip of paper, marked off into the necessary number of equal divisions by the method shown in Fig. 1, is used as a guide for determining the size of the squares into which the design is to be ruled. If the design is such that the ruled squares would be too small and numerous, the sketch can be marked off into squares corresponding to four or even six blocks of the design paper.



This is only one of the many time-saving suggestions presented here by a veteran designer

Technique of Jacquard designing

by Osbert Hughes
Exclusive

THE WORK of a Jacquard designer is essentially that of a draftsman, consisting of the transferring of an idea for a woven pattern to squared paper from which the Jacquard cards can be cut. The original idea may be conceived by a stylist who, in turn, will have this idea drawn up by a sketch-maker as a cloth-size sketch. This sketch is then passed on to the designer for the square-paper work.

For smaller mills these three duties may be at times performed by one person. In larger organizations the functions of each will usually be delegated to different departments, although close collaboration between them is of considerable importance.

Ideas for the stylist may come from many different sources. Some of these may be imported fabrics and historical documents, designs made for entirely different fabrics than the one planned, original free-hand sketches made by artists or sketchmakers, and certain photographic studies, as well as many other sources. This is strictly creative work and the sources of inspiration are many.

The original idea is translated into a sketch made cloth-size for the fabric for which it is planned. This sketch may be a rough, pencil, free-hand drawing, or may be elaborately painted in water-color or show-card colors to approximate the effects to be obtained in the woven fabric. However the work of the designer will be simplified and the ultimate effect of the design when woven can be better forecast when a certain amount of detail work is put into the sketch.

Naturally, the type of fabric to be woven has some bearing on the amount of detail required in a sketch. Sketches for simple two-effect fabrics, such as towels, blankets, damasks, etc., will usually be satisfactory if merely sketched in pencil with the figure motifs shown in colored pencil or water-color paint. More elaborate fabrics such as bedspreads, draperies, upholstery fabrics, etc., will usually call for more detailed work on the sketch to develop and bring out all the weave effects to be used by the designer in making the square-paper design.

Selecting the Design Paper. After the sketch has been chosen

the construction of the fabric for which it will be designed will then be decided. The next step is to determine the Jacquard and type of harness tie that will be used to produce this design. With this information available the designer will be in a position to select the proper size and kind of design paper on which the sketch will be designed.

Textile design papers can be procured in a large variety of different sizes, to suit almost any fabric construction that is likely to be made. In addition, papers are available on which certain standard weaves such as plain weave, various twills and satins, etc., have already been printed. These special papers can be of great assistance, when these weaves are applicable, in saving time and the labor cost of painting these standard weaves on the design. In addition most design papers are ruled in blocks of six, eight, twelve, or sixteen squares, these blocks often being subdivided by additional ruled lines. Selecting the appropriately ruled paper for the type of Jacquard for which the design is to be made will eliminate the necessity of the card-cutter having to rule the paper for his own purposes, thus reducing the cost of card-cutting as well as having clearer and more accurate rulings for the card-cutter to follow.

For instance, a design for a 400-hook Jacquard, with eight hooks to a row, is best designed on a paper ruled off in blocks of eight squares. The 600-hook Jacquard, having twelve hooks to a row, will usually take a paper with twelve squares to the block, while the fine index machine, having sixteen hooks to the row, will usually be best designed on a sixteen-to-the-block paper. There will of course be times when due to special harness ties, castouts in the Jacquard, or when some form of simplified designing is being done, that other size papers will be most suitable. In such cases the card-cutter will rule off the design paper to suit his convenience.

The selection of the proper size of design paper should always be based on the finished construction of the fabric, not on its woven, or grey, construction. For instance a fabric with a finished construction of 96 ends per inch might be woven with 90 ends per inch in the grey, but if the design paper is based on this grey sley the design in the finished fabric would be distorted, stripes, etc., would all be too narrow, and the whole effect would probably be quite unsatisfactory. However by basing this design on the finished sley of 96 ends per inch the finished pattern will appear in correct proportion and without distortions.

The type of card-cutting to be done will also enter into the selection of the correct design paper. For instance, a fabric with the finished construction of 96 sley by 64 picks per inch, if only one card is to be cut from each line, would use a 12x8 or similarly proportioned paper. If, however, two cards are to be cut from each line, the paper should be based on 96 sley by 32 picks per inch, and then the design paper would be 12x4.

Certain fabrics are designed in a simplified manner with one square of the design paper representing two or more hooks in the Jacquard, and the paper should be calculated accordingly. For some fabrics, one square of design paper may represent two hooks, with two cards cut from each line. The construction of the 96x64 fabric would then become 48x32 on the design paper, which would still call for the 12x8 paper, but all calculations of stripes and other features of the pattern would be based on 48x32. If this should be overlooked and the 96x64 used in figuring, all motifs will appear twice as large in the cloth as they were intended, according to the sketch.

Squaring-Off the Sketch. After the correct size of design paper has been selected and the proper Jacquard tie determined, the design paper will be laid out to contain the exact number of hooks in the Jacquard for the width of the pattern, and the exact number of picks in the length of the pattern. Extreme care should be taken in doing this, otherwise the cards when cut will not fit the Jacquard tie. A miscalculation in laying out the design paper could result in many hours of designing work being wasted, since the whole job would probably have to be remade.

On small patterns, containing two or more repeats of the pattern in the width of the tie, it is often possible to design only one repeat, which the card-cutter will cut two or more times on the card as required. This is usually only practicable when the number of rows on the card can be exactly divided into the required number of rows for each repeat. For instance, if the Jacquard tie is a fine index using 1280 hooks, which is 80 rows of 16 hooks each, and the pattern repeats twice in the width of the tie, the design can usually be made on 40 rows containing 640 hooks, and then cut twice over.

One exception to this is when the weave used in large areas of the pattern, such as the ground weave, will not repeat exactly in the number of hooks used in the Jacquard tie. In this case it is usually necessary to design the full number of hooks and insert this weave in such a manner that the "break" in the weave repeat will be as inconspicuous as possible.

Another exception might be in the case of a small pattern to be designed on a number of hooks not exactly divisible in the number of hooks used in the repeat of the Jacquard tie. For instance, if the pattern should contain three repeats to the full width of 1280 hooks it would probably be necessary to make the design the full width of the tie, making two repeats of the design on 427 hooks each and the other repeat on 426 hooks. This totals to the 1280 hooks required, and the design in the repeat containing the lesser number of hooks should be so manipulated as to make the variation as inconspicuous as possible.

Considerable ingenuity on the part of the designer is sometimes required when a large number of small repeats appears in the pattern and will not divide exactly into the total hooks of the Jacquard tie. For instance, if there should be twelve repeats to be designed on the 1280-hook tie, these could possibly be divided into eight repeats of 107 hooks each, and four repeats of 106 hooks each, spaced on the design as two repeats of 107 hooks to one repeat of 106 hooks, totaling 320 hooks or 20 rows, which would

be so designed and cut four times over on the card.

However, on occasion such manipulations may not be acceptable, since the irregular widths of the repeats may tend to show as unwanted stripes, and thus spoil the uniformity of appearance in the woven pattern. In such cases the width and number of the small repeats could be changed so as to fall on a number of hooks exactly divisible into the number of hooks in the Jacquard tie. Another alternative would be to introduce a castout of enough hooks so that the total hooks can be divided by the number of hooks desired for each small repeat. For instance, if the 1280-hook tie has 12 hooks cast out, the remaining 1272 hooks are exactly divisible by 12 repeats of 106 hooks each. If none of these methods is acceptable it is best to reject the sketch for use on this particular Jacquard tie.

The simplest method of drafting the sketch onto the design paper, after the paper is laid out with the correct number of hooks and picks, is to draw squares on the sketch corresponding to the blocks on the design paper. The repeat of the pattern on the sketch is first determined, keeping in mind how the pattern is best centered in the cloth with the most desirable breaks at both selvage edges. In the case of symetrical patterns on a straight Jacquard tie, only one-half of the design needs to be squared off, this half when painted will then be copied in reverse on the rest of the design paper. When a "point" tie is used on the Jacquard it is of course only necessary to design one-half of the pattern, the reversing being done automatically by the Jacquard tie, and the sketch should be squared off accordingly.

The width of each square, corresponding to a block of the design paper, can be calculated and carefully marked off on the sketch with a ruler. However, a simpler method employed by many designers is to mark the width of the repeat on a separate strip of paper and then by laying this strip diagonally across a piece of design paper mark off the required number of divisions on the strip, then from this strip mark off the blocks on the sketch and rule into squares accordingly. This method is illustrated at *Fig. 1,* which shows a strip with a repeat 6¼ inches long divided into eight equal parts. Incidentally, this is a quick and handy method of dividing any required length into a given number of equal parts, and can often be employed when lining up forms, reports, etc.

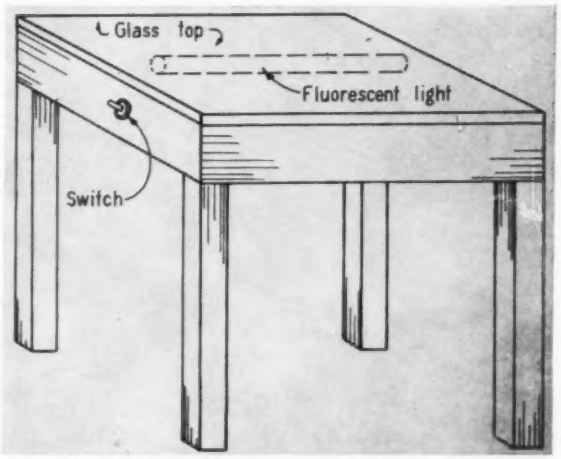


Fig. 3. Copying an original pattern onto design paper is made easy by the use of a copy desk with a glass top, illuminated from beneath by a fluorescent bulb. It is easily and cheaply made by any carpenter. The desk is also useful in analyzing woven samples.

Illustrated in *Fig. 2* is a sketch ruled off into squares in this manner and ready for transfer to the design paper. In some cases, when the ruled squares might be too small and numerous, as in the case of a fabric with a high sley and picks, it is customary to square off the sketch into squares corresponding to four, or even six, blocks on the design paper. This makes it easier for the designer to follow the ruled squares and the result will be just as satisfactory. On low sley and pick constructions one square on the sketch may readily represent one block of the design paper.

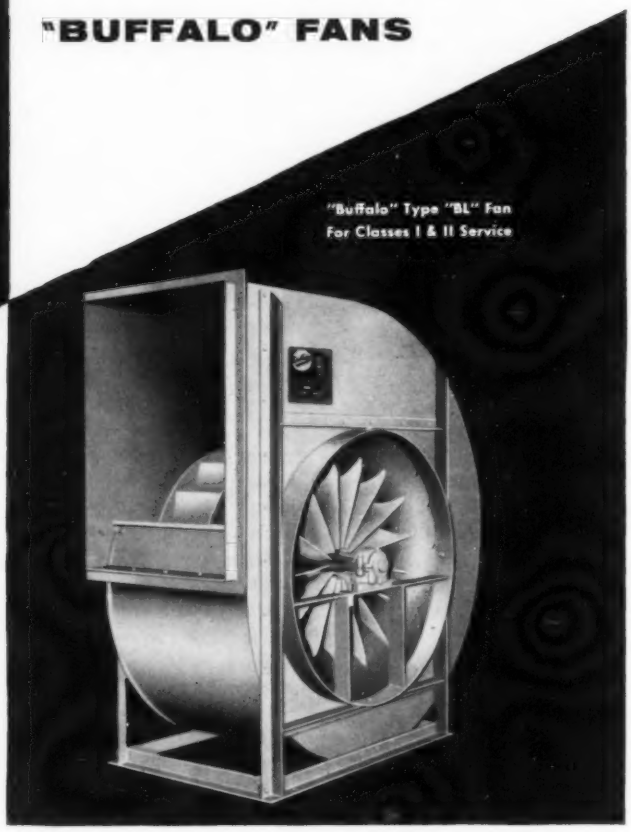
After the sketch has been ruled off into squares the designer will lightly draw the lines of the pattern by following the lines in each square of the sketch on the corresponding block of the design paper. When completed this lightly drawn pattern can be rectified for minor imperfections, curves and other shapes improved, and it will then be ready for the application of the painted figures and the insertions of the desired weaves.

Some experiments have been made in the use of enlarging devices, adapted from photographic sources, which transfer the image of the sketch directly on to the design paper without the need of squaring off the sketch and then drawing it in freehand. If such equipment is available some such method might show considerable savings in time and effort for this work. However, to be practical the sketch would need to be very carefully and accurately made while the design paper should be an exact fit to the proposed construction of the cloth.

Inasmuch as most designers do not have access to this type of equipment, the method of squaring off the sketch, as outlined above, is that most commonly employed. Also it sometimes happens that no design paper will exactly fit the required construction. In this case the nearest size of paper will be used and the "squares" on the sketch will be rectangular in shape, rather than exact squares. However, by following these rectangular "squares" when drawing the pattern on the design paper, even though the figures on the design may appear to be somewhat distorted, the woven pattern will appear exactly proportioned, as in the original sketch.

The Copy Desk. It frequently happens that portions of the design have to be copied exactly in other sections of the pattern. Or, as in the case of a symmetrical pattern woven on a straight tie, the whole pattern has to be copied in reverse. Other copying is done when small motifs have to be painted out several times in the width of the repeat. For all copying work the

MINIMUM MAINTENANCE, LONG LIFE ASSURED BY THESE HEAVY-DUTY "BUFFALO" FANS



The high performance characteristics of these two outstanding "Buffalo" Fans has resulted in their widespread use in the field of industrial air handling. In addition to offering peak-efficiency operation in their respective classes, both the "BL" and the "BLH" bring you a bonus economy factor of *maintenance reduced to an absolute minimum* throughout a long, productive life. This minimum maintenance factor is directly due to unusually rugged "Buffalo" construction features such as:

HOUSINGS — The heavy gauge sides and scroll are of all-welded construction. Heavy structural steel bracing provides housing stiffness and rigid bearing support. Flanged inlets and outlets give added support.

SHAFTS — Hot-rolled or forged shafts are ground to close tolerances for perfect wheel and bearing fit.

WHEELS — Sturdy backward-curved blades are welded to the die-formed shroud and welded or riveted to the solid backplate. Heavy hubs assure permanent shaft alignment. For higher tip speeds, reinforcing rings provide necessary wheel rigidity.

BEARINGS — Self-aligning anti-friction bearings are designed for continuous operation at maximum tip speed. Horizontally split, ring-oiled, self-aligning, babbitted sleeve bearings are also available.

For full details, contact your "Buffalo" representative, or write for Bulletins F-102 and F-200.

Minimum maintenance is assured by the famous "Q" Factor — the built-in QUALITY that provides trouble-free satisfaction and long life in every "Buffalo" product.

"Buffalo"

BUFFALO FORGE COMPANY

175 Mortimer Street • Buffalo, N. Y.

BUFFALO PUMPS DIVISION, BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING FORCED DRAFT COOLING HEATING PRESSURE BLOWING

use of a copy desk is invaluable in saving time and ensuring greater accuracy in reproducing the original motif.

The copy desk consists of a desk with a glass top in place of the usual wood or other opaque surface. A light is placed underneath the glass. This light can be an ordinary electric bulb although, due to heat this type of light generates, more comfortable working conditions as well as a more even distribution of light can be obtained by the use of a fluorescent fixture. If the surroundings are darkened, as by putting out the lights in the room and lowering the window blinds, even better visibility will be secured. If this is not practical, good results may be obtained by placing a screen around the desk and the operator to shut out extraneous light.

The copy desk can be cheaply and easily made by any carpenter and will very quickly pay for itself. The sketch at *Fig. 3* shows the simple form of a useful and practical copy desk.

The copy desk is used by taking the original design after it has been painted out, laying this original design on the glass top, and then placing a blank sheet of design paper over it. The light will shine through both papers and it is then a simple matter to copy the original design onto the blank sheet. When the original is to be reversed in the copy, the original will be placed face down on the glass. This will show the design in reverse on the paper on which it is to be copied. Care must always be exercised in placing the second sheet in correct relationship to the original so that the copy will appear in the proper squares.

Another valuable use of the copy desk is when intricate weaves have to be painted onto the design. In this case the desired weave should have one complete repeat painted on a small portion of design paper of the same kind as the design for which it is intended. This weave portion will then be fastened with glue or mucilage to the glass of the copy desk. By laying the design paper on top of this weave portion, moving it to different sections as required, the rapid and accurate application of even the most elaborate and intricate weave becomes a relatively simple matter.

The copy desk is also useful when involved and intricate weaves have to be analyzed and duplicated from a woven sample. By placing the woven sample over the lighted glass and using a pick counter or other magnifying glass the weave formation can be more easily determined than by any other means.

For very intricate and difficult weaves better accuracy in less time can be secured if the work is done by two people. One designer will analyze the cloth and by following one warp end or one filling pick at a time will determine and call out the number of risers and sinkers found. The other designer will mark this down on a piece of design paper. Once a full repeat of the weave has been picked out and marked down the weave can then be transferred to the new design in the usual manner.

Card-Cutting Instructions. Simple Jacquard designs are usually woven with one warp and one filling, with the figure motifs produced in filling floats on a plain weave or warp float ground. There is of course an endless variety of weave combinations that can be used. The figure motifs are generally painted with red paint while the weaves in the figure are then indicated with black paint over the red. The ground portions are warp float and this weave is indicated with red paint on the white paper. If the goods are to be woven face up in the loom the card-cutting instructions for such a design would read as follows:

Cut black and paper

Sometimes certain weaves, instead of being painted out in full detail on the design, are indicated by the use of extra colors and cut by the card-cutter from weave slips showing one repeat of the weave only. These weave slips are usually made by the designer for one row of the Jacquard and of a convenient length, and the card-cutter will pin this weave slip to the edge of the design, moving it as required as his work progresses up the length of the design. The card-cutting instructions should carry full information regarding the weave slips and how they are to be cut on the design's cards.

More complex designs, for fabrics woven with two or more warps, two or more fillings, or various combinations of both, will be painted with a large number of colors. Each color will represent a different weave and weave slips will be provided for each color. This type of design is usually made on design paper in which each square will represent two or more warp ends and two or more filling picks. The card-cutting instructions should be written out in full detail showing how many cards are to be cut from each line, and also the hooks to be cut from each square, as well as providing the necessary weave slips, which are usually numbered, to be used in each color. These instructions are best written on a separate sheet of paper for the benefit of the card-cutter; in addition, it is good practice to put the card-cutting instructions on the back of the design itself as a permanent record of how the cards have been cut.

On simple fabrics the card-cutter will usually correct all card-cutting errors himself. For this purpose the first yard or so woven should be given to the card-cutter and designer for inspection before the loom is placed in production. This also affords an opportunity for any minor changes or improvements in the design that may appear desirable.

On complex fabrics and designs, card-cutting errors may be rather difficult to locate and correct, and the card-cutter may require some assistance from the designer for this work. A good method is to take the woven sample and by careful inspection locate every card-cutting error and mark it by inserting a common pin in the cloth at each error. By comparing the holes in the card with the design and the card-cutting instructions, each error can be found and corrected and the applicable pin then removed from the sample. When all the pins are removed the cards should be correct and free from card-cutting errors.

The number of errors to be expected will vary of course with the competency of the card-cutter and

(Continued on page 233)

Fabric wall covering provides beauty and utility with Dow Latex in the coating.

Dow Latex makes fabric wall coverings easy to clean, durable, colorfast

Fabric wall coverings available in many new designs and colors.

Let Dow Latex help you meet today's big demand for wall coverings that are as durable as they are decorative!

With Dow Latex you'll find it easy to overcome shortcomings in the fabric substrate and improve printability and embossability. Here is the coating that makes wall coverings easy to clean, durable and colorfast . . . without introducing problems of aging, paste resistance and adhesion to the fabric. Best of all, with Dow Latex it costs you less to add the features that clinch sales.

A Dow Latex may be the answer to your textile coating problems. Call your nearest Dow sales office or write today to THE DOW CHEMICAL COMPANY, Midland, Michigan, Coatings Sales Dept. 2168A.

LATEX T.M.

YOU CAN DEPEND ON DOW

Northern North Carolina-Virginia mill men were told

How to run cavitomic cotton

Staff report

TEXTILE MILL management should encourage exchange of ideas and make every effort to get the respect and cooperation of labor, T. O. Moore, vice-president of P. H. Hanes Knitting Co., told members of the Southern Textile Association as he welcomed them to Winston-Salem, N. C.

H. W. Buchanan of Erlanger Mills presided at the meeting of the Northern North Carolina-Virginia Division of the association, which was held at Mineral Springs High School, Winston-Salem, N. C.

S. C. MAYNE, Anderson, Clayton & Co., discussed "Cotton Fiber Quality and Current Domestic Mill Requirements," and told the group that 1957 crop cotton showed evidence of microbiological field damage. The malady is commonly called cavitoma; it is similar to mildew and makes further damage in processing likely.

Increased waste, more ends down, and increased fly accompany field-damaged cotton in processing, and these cottons have higher than average Micronaire readings, high pH, and low ESRM (easily soluble residual matter).

One solution to the problem is to blend with undamaged cotton in a mix of about 50 bales. Strength of the blend goes up in direct proportion to the amount of unaffected and undamaged cotton in the mix. In tests, the best appearing yarn was made from a 50-50 blend of good cotton of 3.0 Micronaire and damaged cotton of 4.2 Micronaire.

Neps in the card web decreased in proportion to the amount of coarse field-damaged cotton in the blend. There are five measures to improve the situation upon encountering cavitoma. These are: (1) careful blending at opening; (2) use cotton with lowest Micronaire; (3) use grades of cotton containing more trash; (4) use appropriate compensating staple length; (5) maintain machinery in good condition.

Lint cleaners at the gins consistently raised classer's grade while yarn appearance declined along with yarn strength. Classer's grade has had little relation to yarn grade, and it was found that SLM bright made better yarn in many instances.

Creamy cottons produce yarns as satisfactory as white grades, and these bleach satisfactorily. Spotted cotton performs likewise but produces more waste. The larger amount of waste is more than offset by lower cost.

The latest type high-density cotton bale is completely wrapped in burlap, is thereby protected, uses less room, and mill experience has shown satisfactory bloom of the bale upon opening and with no ill effects noted, Mr. Mayne concluded.

SHERMAN LAW, superintendent of Jewel Cotton Mill, Thomasville, N. C., led an open forum discussion on opening and picking problems. Beater speeds on one-process pickers varied from 820 to 1020 rpm. One mill man reported trouble with pepper trash in M cotton run in a 32-bale mix while operating Kirschner beaters at 1020 rpm. In this instance a two-blade beater was operated at the same speed back of the Kirschner beater.

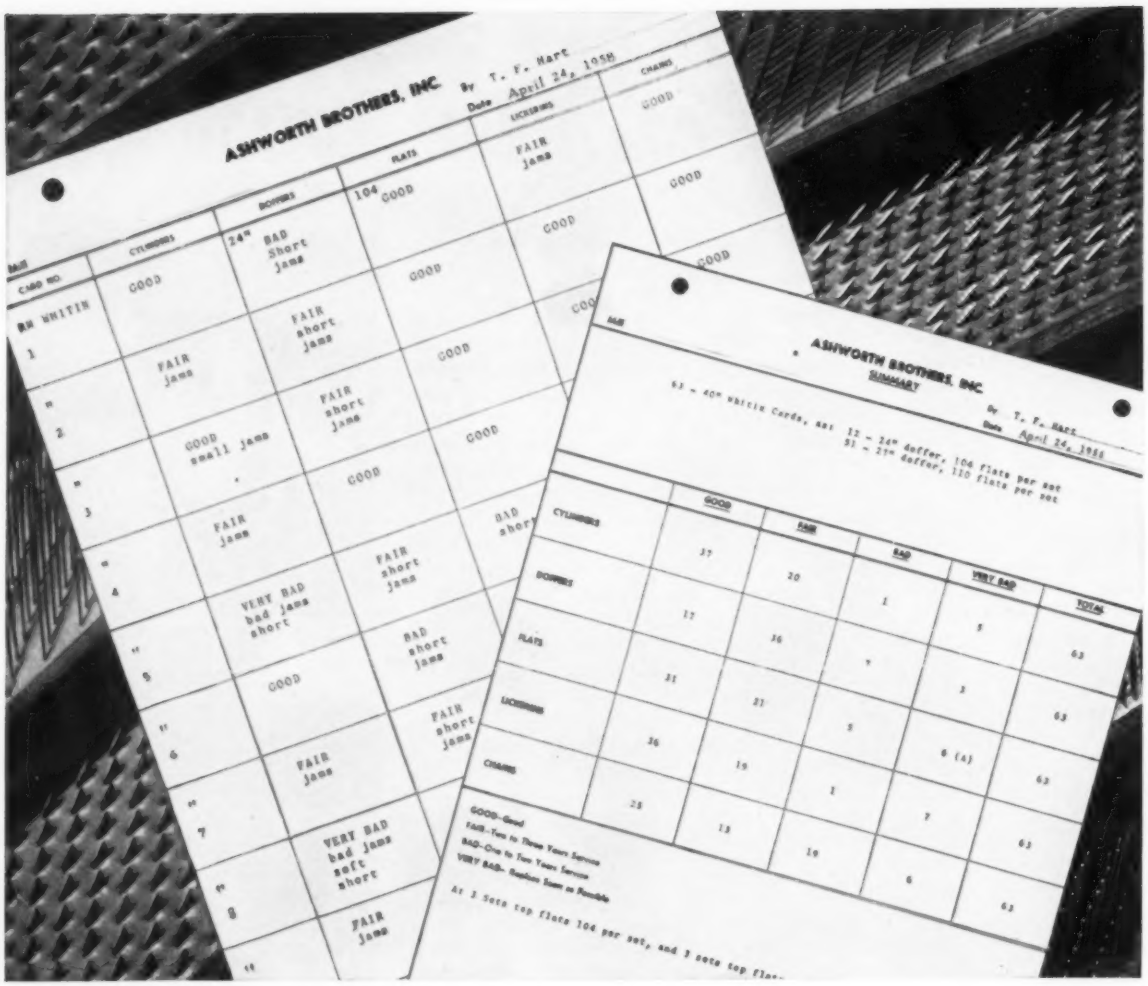
Another mill man commented that the type of cotton is related to the amount of pepper trash found, and his mill operates pickers as slowly as possible without affecting fiber break. 43 blows per inch and 820 rpm of the Kirschner and 900 rpm of the three-blade

(Continued on page 187)

Buchanan — Erlanger Mills

Mayne — Anderson, Clayton & Co.

Law — Jewel Cotton Mill



Ashworth CARD CLOTHING SURVEYS

They Forestall Poor Carding and Costly Card Shutdowns

ASHWORTH SURVEYS are made, without cost or obligation to the mill, by trained Ashworth personnel. They include detailed inspection of cylinder clothing, doffer clothing, flat clothing, flat chains, and lickerins.

A written report is submitted, depicting by card number the exact conditions as found. A summary is included with the report, recapping under headings "Good", "Fair", "Bad", and "Very Bad" the total number of each item falling into these categories.

In addition to the complete word picture of the condition of the items checked, comment is made on inequalities in grinding of flats, damage to flat foundation from wire cleaning rolls, condition of flat grinding cradles, if any, and the positioning of the flat grinder stands on the card. Comment is also made on bruises or jams on cylinder and doffer clothing, and the possible causes of such and recommendations as to corrective measures.

Since it will not obligate you to find out more about Ashworth Surveys, why not write or phone our nearest office.

Ashworth PIONEERS IN CARD CLOTHING

126-S

For Prompt Service . . .

Call ASHWORTH Bros., Inc.

Greenville, S. C.*†‡ ..... Cedar 3-3631
Charlotte, N. C.†‡ ..... Franklin 5-6069
Atlanta, Ga.†‡ ..... Murray 8-0501
Philadelphia, Pa.*†‡ ..... Davenport 9-3490
Fall River, Mass.*†‡ ..... Osborne 4-4693
Dallas, Tex. (Textile Supply Co.)†‡, Riverside 4729
Los Angeles, Calif. (E. G. Paules & Co.)‡, Axminster 3-6265

*Factory †Repair Shop ‡Sales Office

PRODUCTS and SERVICES

Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Top Flats Reclothed. Flats Remilled. Flexible Bends Reground.

3 FACTORIES • • • 6 REPAIR SHOPS • • • 7 SALES OFFICES

HOW OTHER MEN MANAGE

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •

Here is another idea on optimum package sizes

THE EDITORS:

In the interesting discussion on "What Size Packages Should We Make?" in the March issue of TEXTILE INDUSTRIES, one important point is not mentioned. All spinners are trying to get all possible net weight on each bobbin consistent with good quality yarn and efficient machine operation.

It would hardly be reasonable or profitable to reduce this net weight per bobbin to accommodate the relatively cheap process of spooling or winding. Modern spoolers permit regulation of cycles and drum speeds to take full advantage of the possible maximum yardage on each bobbin. Greater yardage means less work for the operator, reduced knots in the packaged yarn, and probably lower rates.

So the objectives of any program seem to be to get full yardage on every bobbin of each yarn count. If the yards per bobbin for each yarn number is known, drum speeds and cycles can be regulated to give the greatest operating economy and good production balance.

There is a definite relationship between net weight, yarn number, and yardage per bobbin. Front roll speeds, twist per inch, contraction, doffing time, or traveler number do not affect this relation.

For greater precision the actual yarn number, not the nominal yarn number, should be used in calculating yards per bobbin. The formula

$$\frac{\text{Ounces per bobbin} \times 840}{16}$$

gives a constant which, when multiplied by the yarn number, gives the yards per bobbin. For example:

$$\frac{8 \times 840}{16} = 420.$$

When multiplied by the figure for the actual count (20.18) the result is 8476 (420 x 20.18).

Every mill should have the tare weight of each type bobbin used. The gross weight of ten full bobbins with tare deducted and divided by ten will give a good average weight and yardage per bobbin. With yardage values available for each yarn count, drum speeds and cycles can be arranged to give the best results in keeping spinning and winding production in balance.

CONTRIBUTOR No. 1007

Need an extra $100? Who doesn't! Enter TI's Kink Contest!

Send your entry now! This contest ends August 15, 1958

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are adjudged.

The contest rules are simple:

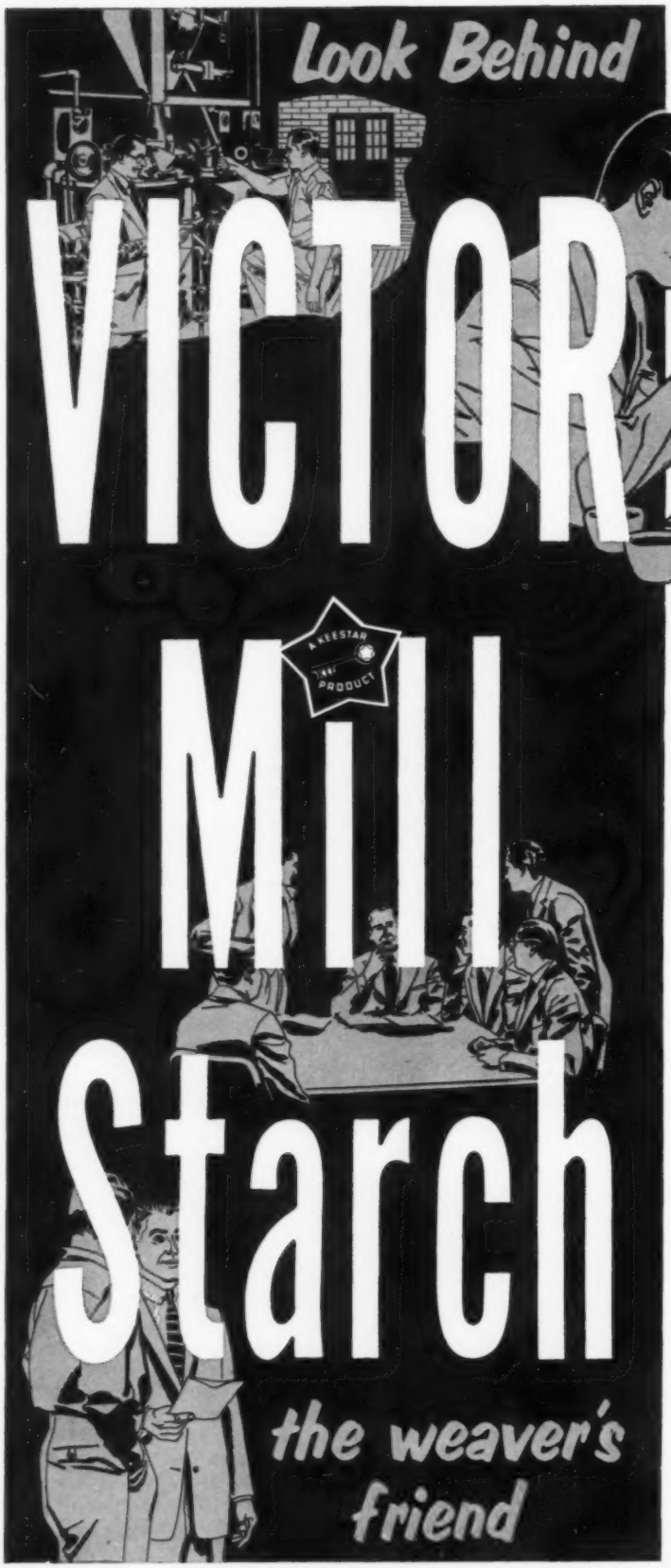
► All contributions must be postmarked not later than midnight, August 15, 1958.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to: The Editors TEXTILE INDUSTRIES, 806 Peachtree St., N. E. Atlanta 8, Georgia.



Your Problems Are Our Success

Victor Mill Starches are so noted for uniformity, they are a recognized aid to uniform slashing operations. But that alone can't explain the big preference for Victor Mill and other Keestar products.

Keever goes beyond "delivering the goods." Each sales-service man knows the textile industry. He is a trained specialist in mill problems. He consults with you all down the line utilizing the collective experience of nearly 40 associated textile engineers, chemists and technicians.

The success secret of Keestar products lies in the men who make them – and serve you on the job.

THE KEEVER STARCH CO.
General Offices – Columbus, Ohio

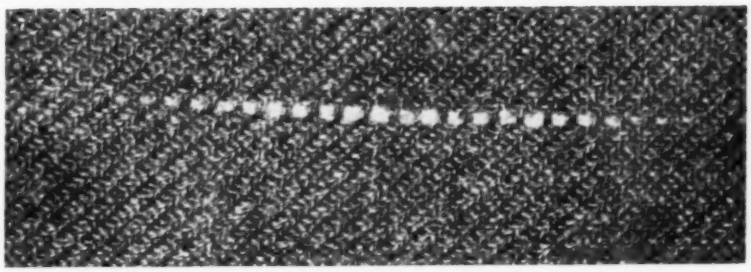
Processors of corn, wheat and blended starches for industry since 1898

Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
1500 S. C. NATIONAL BANK BLDG.
GREENVILLE, SOUTH CAROLINA

"How do I keep my rayon staples separate?"

THE EDITORS:

I am the card room overseer in a plant processing synthetics. Try as we might to prevent them, we still have a few acetate slubs showing up in our viscose fabrics now and then. The result, to put it mildly, is not easy to correct, and we are looking for advice from other mill men concerning ways of preventing such mixing. For a good example of what we face, take a look at the enclosed illustration.



We feel that screening one process from another is the best answer, and we have done some of that. But the presence of such slubs as the one pictured here is evidence enough that screening is not the only answer.

With your help I should like to enter into correspondence with mill men with whom I can exchange precise detail.

CONTRIBUTOR NO. 1013

(Give us the details, and we will give them to CONTRIBUTOR NO. *1013. We pay the bills, too, at our space rates.—The Editors)*

What is a good average life for card clothing?

THE EDITORS:

We should like to see in your magazine a discussion of the subject of card clothing life: What is considered a good average life of doffer and cylinder fillet when middling 1 3/32″ stock is processed from 14.5-oz laps into 55-grain sliver at a rate of seven pounds per hour?

In discussing this subject we should like to know what is considered the best way of removing fly from under the cylinder and doffer. We find that in using the stripping vacuum we get too much dirt in the fly.

We should like to rake it out with some type of brush, but we feel that sometimes the operator damages the doffer clothing while removing the fly this way. We operate our cards 120 hours weekly.

CONTRIBUTOR NO. 1014

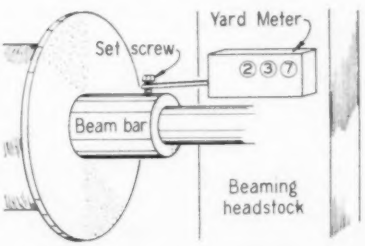
(If you have any tricks up your sleeve which this man can use, please send them to us so we can forward them to him. We shall pay at current rates for material published.—The Editors)

A way to make beams run out evenly

THE EDITORS:

Looms which use several beams on one let-off bar are often left with warp waste because the beams do not weave off together. The causes, due to different tensions in warping, are mostly unavoidable. The way we overcome the trouble is to count the revolutions of the beam during the warping operation.

For instance, we often place four 36″ beams side by side on the same bar to form a 12′ fabric. We fix a yard meter on the front of the beaming, or slashing machine, in such a way that a pin or set screw on the beam bar can knock the meter every time it revolves.



Each bump registers one turn on the meter.

As the beams have revolved the same number of times in warping, and make the same revolutions in weaving off, they finish dead level. This is done in spite of slight differences in tension or diameter of warp—differences which would ordinarily accumulate to the end of the beam, but which will be found nil under these or similar conditions.

CONTRIBUTOR NO. 1010
(England)

MECHANIZE all Scrubbing Operations into 1

with a COMBINATION SCRUBBER-VAC!

Applies cleanser, scrubs, flushes, and picks up—in ONE operation!

(Powder Dispenser and Level Cable Wind are accessories)

Here's a timely answer to the need for reducing labor costs—*a single cleaning unit that completely mechanizes scrubbing.* A *Combination Scrubber-Vac* applies the cleanser, scrubs, flushes if required, and picks up (damp-dries the floor)—*all in one operation!* Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans ...and the features that make the machine simple to operate. It's *self-propelled,* and has a *positive* clutch. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly.

Finnell's 213P Scrubber-Vac at left, an *electric* unit for heavy duty scrubbing of large-area floors, has a 26-inch brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon condition of the floors, congestion, et cetera. (The machine can be leased or purchased.) *Finnell* makes a full range of sizes, and *gasoline* or *propane powered* as well as *electric* models. From this complete line, you can choose the size and model that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that *a Finnell Floor Specialist and Engineer is nearby* to help train your maintenance operators in the proper use of the machine and to make periodic check-ups.

For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 3506 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES

More comments on the spinner's job

A critic disagrees; an author defends

THE EDITORS:

I have read the article "Let Spinners Spin" included in your August 1957 issue with considerable interest, and it is surprising that at this time such a subject is felt applicable to mills in the U.S.A.

From my own observations on visits to your country in 1947 and in 1952, when I was fortunate enough to inspect a number of the outstanding companies, the principle of work specialization was accepted and practiced in every case. Further, the various British commissions which toured the U.S.A. textile industry emphasized that this was general practice. However, the subject is interesting, and because of this I should like to make certain observations.

The author states that by the elimination of the main cleaning duties from the spinner's task, the direct production costs can be materially reduced. If it assumed that the operative was correctly loaded in the first instance, the cleaning duties must still be done; and unless mechanical means can be employed, indirect labor will increase.

It may be possible to pay lower wage rates for the cleaning work, but this difference could hardly justify a statement that "savings would be far greater than the money which will have to be paid for additional cleaners." If of course the spinner's work was not originally measured correctly this could apply; but the savings would be due to accurate time studies, rather than an alteration in work duties . . . Although there is little doubt that the spinner's job should include as few cleaning elements as possible, there are important factors which must be realized when the assignment is altered as suggested.

With reduced cleaning the main elements are creeling and piecing, and although an average end break rate is mentioned, it is a fact that breaks do not remain at an average level throughout a shift . . . The tables given in the article which describe the work elements do not indicate walking time . . . the work of creeling must be more closely controlled and planned. . .

I feel that the article did not stress these points sufficiently, and that such a revision of work duties as suggested, must be preceded by good management, so that variations in the end breakage can be kept to a minimum. While these conditions may apply to a majority of mills in the U.S.A., it must be remembered that the magazine TEXTILE INDUSTRIES circulates in many countries where management is not on such a high level, but where such articles as the one under discussion are liable to be taken at their face value. For this reason it is important that the full implications are included, so that the possible disadvantage can also be appreciated.

CONTRIBUTOR No. 9097
(*South America*)

THE EDITORS:

CONTRIBUTOR No. 9097 states that "it is surprising that at this time such a subject is felt applicable to mills in the U.S.A."

. . . We knew of such specialization approximately twenty years ago . . . and up to a few short years ago such specialization was still going on. There are a few reasons why such specialization was "slow" in being adopted, let us say, in practically all mills.

In 1947 and in 1952, when CONTRIBUTOR No. 9097 visited the U.S.A., job specialization and modernization were at full peak. We have no idea what mills your contributor or the British commissions visited, but we feel sure they were modern mills as to the latest types and advances in machinery and job methods.

Had he and the British commissions visited mills dominated by unions who look askance on any job layout changes that reduce personnel, such as is prevalent in the northern areas of the U.S.A., or had visited mills that were reluctant to change because their production efficiencies were constantly high on what we now presume to be old and antiquated methods, we are sure a more representative picture would have been revealed to them. We are not condemning the latter—but we have worked under both.

". . . savings would be far greater than the money which will have to be paid for additional cleaners." First, we must recognize one fact: The textile worker in the U.S.A. is the highest paid textile worker in the world. Any savings accrued here will approximate up to ten times the savings elsewhere in the textile world . . . In one particular instance . . . a 66,000-spindle mill had 16 spinners working under the "spin and clean" tasks . . . Today this department, under job specialization has seven spinners with four added cleaners. Without giving this mill's exact rates . . . reduction of nine spinners saved $450.00; an increase of four cleaners cost $180.00 per week—a net savings of $270.00 per week.

We agree . . . patrol and walking time could have been shown separately . . . but how would you average patrol times? We have known "patrol times" to become a controversial subject . . . we definitely believe that this is wholly an individual mill policy. Patrol times have to have much flexibility . . . Of course ends down do not remain at an average level throughout a shift, but an average can be drawn on a per thousand-spindle-hour basis after time studies . . . The standard should . . . include many of the peaks mentioned. . .

We find it difficult to believe that "management is not of such high level." In the past we have escorted . . . graduates of a leading textile school. . . on a tour of a large and modern mill. If their display of interest and their questions didn't eventually make them good or potentially good managers, then something was wrong. . . . But we'll have to admit we do not know much about South American mill management, so we'll go along with the writer. . . . and state that if this is true, we hope it will improve.

Maley Chagro

GOT A PROBLEM?

Then you may tell it here. This department is reserved for those who wish to further a discussion begun in an article published in this magazine, for those who wish to discuss a problem arising in or about the plant, etc. We pay promptly for all accepted articles; and we do not disclose the writers' names unless we are instructed to do so. See box on p. 167 for kink contest rules.—The Editors

An Ounce of Prevention...

PHOTO COURTESY CELANESE CORPORATION OF AMERICA

G-R Type 631-BL Strobotac, $170. . . .

. . . An ounce of prevention is worth more than a pound of cure.

. . . Preventive maintenance with the General Radio Strobotac can reduce costly fabric defects and machinery downtime.

The Strobotac is a small, portable electronic tachometer that allows you to see defects in a machine *while it is operating at normal speed.* All irregularities present are made visible — irregularities that might not occur and hence, might not be noticed if the machine were operating at lower speeds.

The Strobotac operates from any 115-v, 60-c line. It generates short, controlled, repetitive flashes of light. These pulses are directed at the moving object, which then can be viewed as if it were "stopped" or moving slowly, permitting detailed examination. Speed is read directly on the Strobotac's single dial, which is calibrated from 60-14,400 rpm. By use of multiple images, motion can be stopped and measured up to 100,000 rpm.

At operational speed, many of the possible defects encountered at the frames may be missed by the naked eye. Defects such as slack bands and tapes, crooked idlers or worn spindles, to name only a few, can all be detected by the Strobotac.

The Strobolume, which produces extra high-intensity flashes, is recommended for measurements of slower processes such as textile loom operations. The lamp is readily removed from the instrument cabinet, and has a convenient handle and a ten-foot cable for investigations at otherwise inaccessible locations.

Type 1532-B Strobolume, $275.

Write for the Stroboscope Bulletin

STROBOTAC®

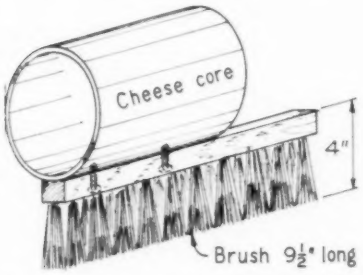
Manufactured Exclusively by

GENERAL RADIO Company 275 Massachusetts Avenue, Cambridge 39, Massachusetts

Brush cleans warper creel bottoms

THE EDITORS:

We keep the bottom of our warper creels clean without blowing them out with compressed air and without manually wiping them. We use a brush attached to a cheese core. Each time we plan to turn the creel we put the cheese holder with its brush in the bottom of the creel just as we would a full cheese. Then as we turn the creel about the brush wipes up the lint.



The cleaner is easy to make. A brush such as is usually found around the mill (the one we use has a round wooden handle, is one inch wide, four inches high, and nine and one-half inches long) can be cut and secured to the cheese holder in a matter of minutes.

CONTRIBUTOR No. 1008
(Canada)

Numbering system flexible

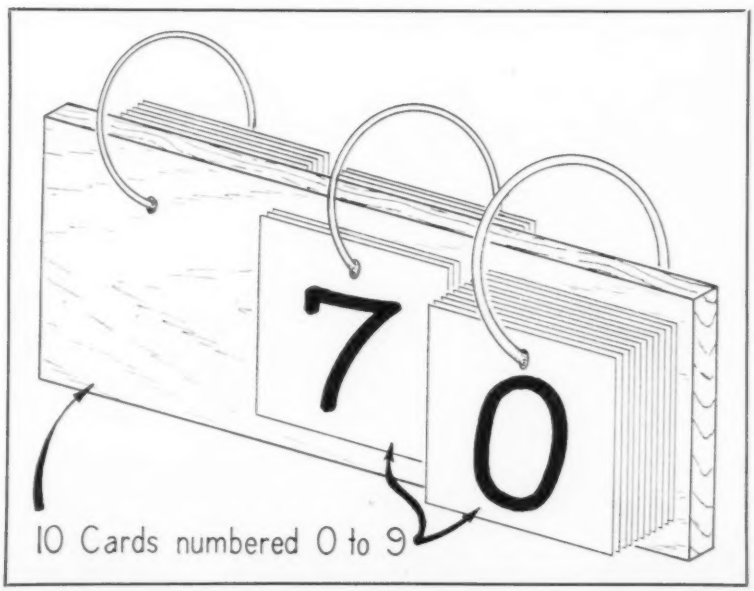
THE EDITORS:

This describes a system of numbers used for indicating yarn counts or batches or work being processed on spinning or winding frames. Clarity of numbers and ease of change are prime requirements for any system.

The use of two or three large rings, each carrying the plastic number 0 to 9, mounted on a metal or wooden bar on the top of the frame end enables both these needs to be met fully as shown in the accompanying drawing.

Any number from 1 to 99 or 999 can be clearly shown and changed instantly. There is no danger of numbers being mislaid, and accidental changes due to knocks or vibrations cannot occur. All the numbers not in use are beneath the exposed numbers, or at the other end of the ring behind the bar and therefore out of sight.

CONTRIBUTOR No. 1002
(England)



Solid card screens?

THE EDITORS:

The plant in which I work produces some synthetic fabrics, nylon and Orlon included, and we wish to gain some pointers on processing the staple at the cards.

We lose much raw stock between the mote knives and the screens, and we are wondering if there is any way we can discard mote knives and use solid screens to avoid loss.

CONTRIBUTOR No. 1015

(For experienced carders of synthetic staples this should be easy. Let us hear from you.—The Editors)

Locating towel holders

THE EDITORS:

We changed the locations of our towel receptacles and effected a considerable saving in the amount of paper used. With the receptacles at or near hand level in the vicinity of the wash basins, we noticed the waste baskets were kept filled with unused paper. The condition sprang from too much being pulled off the roll with each drying, a practice encouraged among our employees by the height of the receptacles.

We relocated the containers by moving them closer to the floor,

placing them two and one-half feet from the floor in place of the original four feet. Now that the employees must stoop to reach the receptacle, and must either pull up or down on the towel while in this position, they do not roll off so much paper. Our towel bill also dropped by some $100 per year, suggesting that in a large plant the savings could be considerable.

This height we have found to be critical. If placed too high on the wall, the receptacles cause the short man to reach upward to grasp the fringe of towel. He then usually pulls the towels to a comfortable level before he tears them off.

On the other hand, receptacles placed too low will work a hardship on the tall man. Conceivably they (the receptacles) can be placed so low that the lazy tall man will prefer to wave his hands about to speed air-drying rather than stoop.

CONTRIBUTOR No. 9090

Fights belt static with water

THE EDITORS:

There are times when the large belt which pulls the knitting machine will collect static electricity in such quantities that the yarns nearest the belt will be drawn into the belt when the machine stops.

We have found that a simple way to offset the static is to place a container of water on the floor just under the belt until the static disappears. Sometimes we sponge the belt with a wet cloth.

CONTRIBUTOR No. 9024

Laying wooden floors over concrete

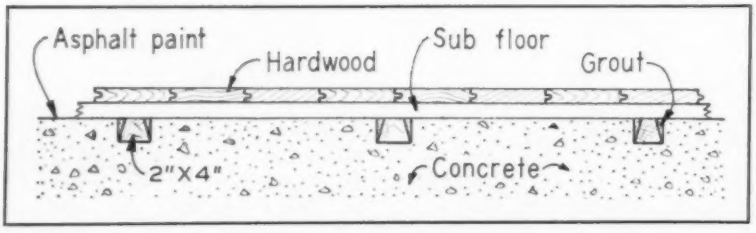
(Contributor No. 9050 began this discussion in the April issue p. 160.—The Editors)

THE EDITORS:

We have approximately 80,000 sq ft of maple flooring laid over concrete. This floor has been in service over 10 years and has proven quite satisfactory. Under present conditions, however, it is quite expensive. Our only trouble with this floor has occurred when water has been allowed to get under the wood. This caused buckling and necessitated a replacement of a section. The sketch shows our method of installation.

We have also covered sections of badly pitted cement floors with "Swift flooring." This has proven very satisfactory and is very economical.

CONTRIBUTOR No. 1004
(Canada)



THE EDITORS:

In 1928 the mill I worked for moved to a new location to a building which had cement floors. We required wooden floors, and to install them we laid 2″ x 4″ cross pieces on the concrete. To these pieces we nailed our maple floors. We left the two-inch air space formed by the presence of the cross members.

At those places in the plant where we wished to install our sewing machines, which required a minimum of vibration, we ran lag screws through the 2″ x 4″ members and into the cement before we laid the flooring.

Wood placed directly on cement will not hold up because of the moisture from the cement. In fact, I have seen a number of hardwood floors that have been laid directly on cement go bad. Such floors buckled as well as rotted.

CONTRIBUTOR No. 1005

THE EDITORS:

It would be helpful to know whether CONTRIBUTOR No. 9050 was laying a new maple floor in the basement where condensation would be a problem, or in an upper story where it would not be.

In one of our plants we have satisfactorily laid a maple floor on eight-inch centers by casting the beams, which were about 4″ x 8″, half their depth in the concrete, first stapling the side exposed to the concrete with aluminum single foil insulation.

Another method used on upper floors is that of laying a cement composition floor on top of the existing floor. The maple floor is then laid directly on this.

CONTRIBUTOR No. 1006

Announcing . . .

the new revolutionary

Speed-Tex
RING

by **SACO-LOWELL**

PAWTUCKET SPINNING RING DIVISION

No Other Ring Like It!

Shortest Breaking-in Period . . . Highest Traveler Speeds!

(over)

The Speed-Tex* RING
by SACO-LOWELL

A Revolutionary Development in Ring Design!
Offers the Shortest Breaking-in Period of Any Ring!

The Saco-Lowell Speed-Tex ring offers the shortest breaking-in period of any known ring. It retains all outstanding Pawtucket qualities — ultra-smooth finish, close tolerances, long life.

The shortest breaking-in period is caused by a new surface metallic alloy. The alloy *is not* intended to remain unchanged — the traveler gradually alters the finish. Invisible after a short time, traces of the alloy in the traveler path aid in providing longer traveler life.

The final finish of the Saco-Lowell Speed-Tex ring is obtained at low temperatures which do not soften the initial case hardness of the basic steel ring. A softer ring would break in satisfactorily, but would have a short life.

Actual mill tests show only 4 or 5 traveler changes are required for complete breaking in, compared to 50 to 100 traveler changes for conventional style rings. The Saco-Lowell Speed-Tex will give consistently, ring after ring, high traveler speeds, the longest life, and the shortest breaking-in period of any ring available today.

TYPICAL INSTALLATION

Yarn, Warp—20.5's
Ring Size—3" Diameter
Spindle Speed—9,000 RPM
Traveler Speed—7,069 FPM
Traveler—
Victor No. 2/0-X2D-191 HRW

Traveler changes during breaking-in period:
No. 1— 1 hour
No. 2— 20 hours
No. 3— 48 hours
No. 4— 96 hours
No. 5—120 hours
Traveler life—120 hours thereafter

SACO-LOWELL Speed-Tex MODEL 01C

Higher Traveler Speeds Than Ever Before!

This exclusive Saco-Lowell ring reaches a new high in large package spinning speeds. Special flange contours permit traveler speeds never before attained. The inner flange, bearing surface of the traveler, is full width to provide a wide, steady traveler path. The outer flange, not a true bearing surface, has been sharply reduced in width.

A wider traveler may be used without changing its total weight. A special wider traveler, developed by the Victor Ring Traveler Division of Saco-Lowell, is also elliptical with a small circle resulting in a low center of gravity. The combination of low center of gravity and increased width result in better traveler balance, more stable operation, and superior running conditions. More bearing area and uniform pressure reduces traveler wear.

The Model 01C Speed-Tex has all of the advantages of other Speed-Tex rings — the shortest and most economical breaking-in period of any ring available. In addition to break-in advantages, it retains the high surface finish and long life of previous Pawtucket rings.

COMPARATIVE MILL INSTALLATION DATA

Mill A 25's Warp Yarn Frame—SG-3D Gwaltney

Model 01C Speed-Tex	Conventional Ring
Ring Size—2½" Diameter Spindle Speed—11,500 RPM Front Roll Speed—154 RPM Traveler Speed—7,500 FPM Traveler—Victor No. 4/0-X3D-89-HRW	Ring Size—2½" Diameter Spindle Speed—10,200 RPM Front Roll Speed—136 RPM Traveler Speed—6,700 FPM

Mill B 24.75's Warp Yarn Frame—SG-3D Gwaltney

Model 01C Speed-Tex	Conventional Ring
Ring Size—2½" Diameter Spindle Speed—11,500 RPM Front Roll Speed—168 RPM Traveler Speed—7,500 FPM Traveler—Victor No. 3/0-X3D-89-HRW Break-in Schedule: No. 1—30 minutes No. 2—24 hours No. 3—48 hours No. 4—72 hours No. 5—96 hours Traveler Life—96 hours	Ring Size—2½" Diameter Spindle Speed—10,600 RPM Front Roll Speed—156 RPM Traveler Speed—6,950 FPM Traveler Life—48 hours

*Patent applied for

PAWTUCKET SPINNING RING DIVISION
CENTRAL FALLS, RHODE ISLAND
SACO-LOWELL SHOPS
60 BATTERYMARCH STREET, BOSTON 10, MASSACHUSETTS
Shops at BIDDEFORD and SACO, MAINE; SANFORD, N.C.; EASLEY, S. C.— Sales Offices: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

Knitting Section

(KEEPS 'EM ON THE LEVEL)

Neutrol

PERFECT DYEING EVERY TIME!

To eliminate redyeing of tightly folded or rolled hosiery, use NEUTROL. It penetrates...levels...retards ...guarantees perfect color control unions and even dyeing. With NEUTROL voids, streaks and off shades are a thing of the past. *For complete information on NEUTROL, call or write to Fancourt today.*

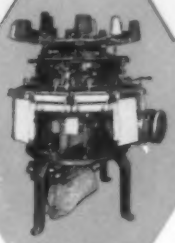
W. F. FANCOURT CO.

518 SOUTH DELAWARE AVE., PHILADELPHIA 47, PA.

SOLVING FINISHING PROBLEMS SINCE 1904

SOUTHERN OFFICE—846 S. MAIN ST., BURLINGTON, N. C.
CANADIAN OFFICE—CHEMTEX PRODUCTS, LTD.
49 DENSLEY AVE., TORONTO 15, ONT.

ANOTHER FASHION LEADER



LH-6

"Bulky Knits" . . . from the Wildman Jacquard LH-6

This versatile knitting machine keeps pace with sales trends by producing a wide range of outerwear • The LH-6 will knit plain jersey with 2x2 cuff, or any other rib . . . links and links . . . cross links and links . . . reverse jersey or plain knits • *For complete technical data, write for bulletin LH-6.*

All day long . . . sweaters belong

WILDMAN / JACQUARD

a subsidiary of Draper Corporation, Hopedale, Mass.

WILDMAN JACQUARD CO. • 1210 STANBRIDGE STREET • NORRISTOWN, PENNSYLVANIA

Manufacturers of HEMPHILL BANNER Knitting Machines

How to boost the quality of stretch hosiery made on Komets

Knit stretch yarns loosely

by K. O. Metz
Exclusive

THE USE of stretch yarns for hosiery manufacturing is, of course, not a new idea. It has been done for quite some time. There was also a time when one particular kind of stretch yarn was alone in a new and promising field and many mill owners, sales representatives, and hosiery buyers were trying to anticipate how far it would go and how fast a pace it would set.

It was inevitable that some dubious claims would be made for the goods produced from this new yarn by some people in hosiery trade. It is unfortunate that these things happen. The one important fact the consumer has learned by trying is that socks properly made of stretch yarn, especially in misses', children's and men's lines, wear extremely well.

Quite a number of difficulties in knitting had to be overcome and there are still some problems directly or indirectly related to knitting stretch yarn which must be solved. Perhaps one of the biggest problems in knitting was to get the fabric knit loose enough to permit maximum retraction after knitting and during finishing operations. This, of course, had to be accomplished without increasing waste, seconds, and irregulars which are normally produced on any kind of yarn.

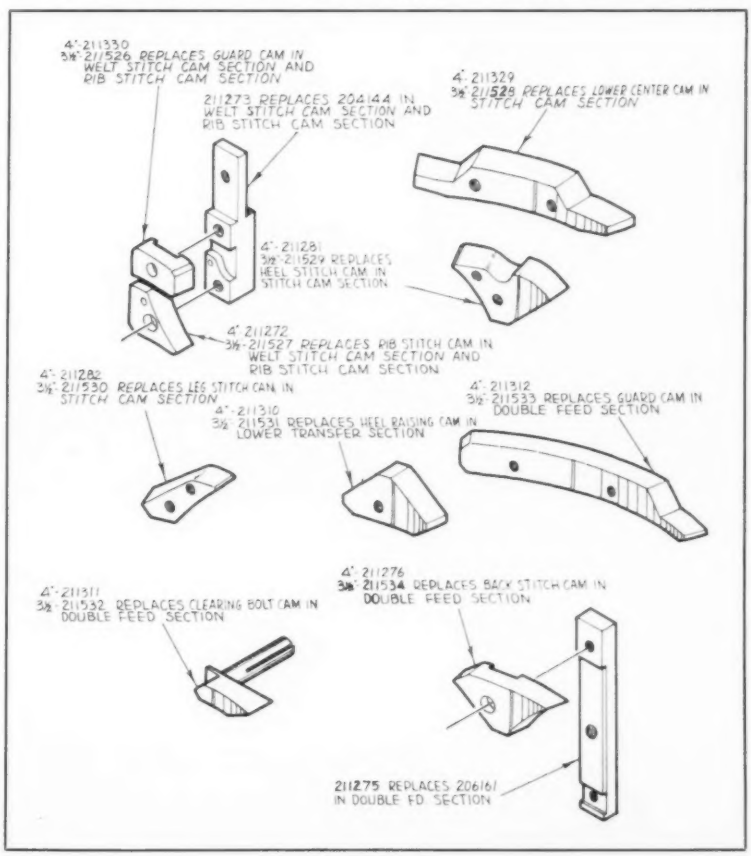
The selection of size or count of yarn in the beginning was limited and not all types of machines would knit the best goods out of available supplies of yarns. Currently, yarn counts are available to more or less suit the needs of different gauges and types of machines, which gives the experimental department in the mill something to work on.

SHOWN in the accompanying illustration are a group of stitch cams, guard cams, slides, etc., which were developed by Scott & Williams for their Komets and Links and Links machines to permit looser knitting of stretch yarns.* This is not a difficult change to make, since you simply remove a stitch cam guard cam and slide from a section and replace it with new ones of like kind.

The auxiliary feed stitch cam slide No. 211,534 shown is for a Links and Links machine; a different type slide is supplied for a plain Model 12 machine. Likewise, the clearing cam No. 211,532 and guard No. 211,533 are used only on the Model 34 machine. The one important change which has been made is that all five stitch cams

(Continued on page 183)

These parts aid knitting with stretch yarns on 3½" and 4", 24-gauge Models 12 and 34.


4": 211330
3½": 211526 REPLACES GUARD CAM IN WELT STITCH CAM SECTION AND RIB STITCH CAM SECTION
211273 REPLACES 204144 IN WELT STITCH CAM SECTION AND RIB STITCH CAM SECTION
4": 211329
3½": 211528 REPLACES LOWER CENTER CAM IN STITCH CAM SECTION
4": 211281
3½": 211529 REPLACES HEEL STITCH CAM IN STITCH CAM SECTION
4": 211272
3½": 211527 REPLACES RIB STITCH CAM IN WELT STITCH CAM SECTION AND RIB STITCH CAM SECTION
4": 211282
3½": 211530 REPLACES LEG STITCH CAM IN STITCH CAM SECTION
4": 211310
3½": 211531 REPLACES HEEL RAISING CAM IN LOWER TRANSFER SECTION
4": 211312
3½": 211533 REPLACES GUARD CAM IN DOUBLE FEED SECTION
4": 211311
3½": 211532 REPLACES CLEARING BOLT CAM IN DOUBLE FEED SECTION
4": 211276
3½": 211534 REPLACES BACK STITCH CAM IN DOUBLE FEED SECTION
211275 REPLACES 206161 IN DOUBLE FD. SECTION

*Another aid for mills making stretch hosiery on Komets is the delayed loose (looper) course attachment described in TEXTILE INDUSTRIES for January, 1958, p. 140.

BESIDE YOURSELF over needle problems? You needn't be —when you can get top-quality needles for knitting, sewing, felting or tufting from...

THE TORRINGTON COMPANY

Torrington, Conn., U.S.A. Branches in New York, Philadelphia, Boston, Chicago, Greensboro, St. Louis. Pacific Coast Representative: E. G. Paules, Los Angeles

More hosiery promotion needed

Ayers told NAHM at Roanoke meeting

Staff report

THE biggest problem of the hosiery industry is underconsumption, or a lack of sufficient demand for hosiery, Nathan M. Ayers, chairman of the board, told the National Association of Hosiery Manufacturers at the 54th annual meeting and 21st Hosiery Industry Conference.

Those within the industry are not satisfied with prices and position from the earnings standpoint, and something can be done about it, Mr. Ayers continued. Something has already been done in the women's hosiery segment of the industry and by the Women's Hosiery Council. Colored nylon hosiery, publicity campaigns, and the hosiery fiesta idea have taken hold, and in branded lines about 20 per cent of sales are now in colors. The balance is evident in production and demand of full-fashioned stockings, the speaker indicated.

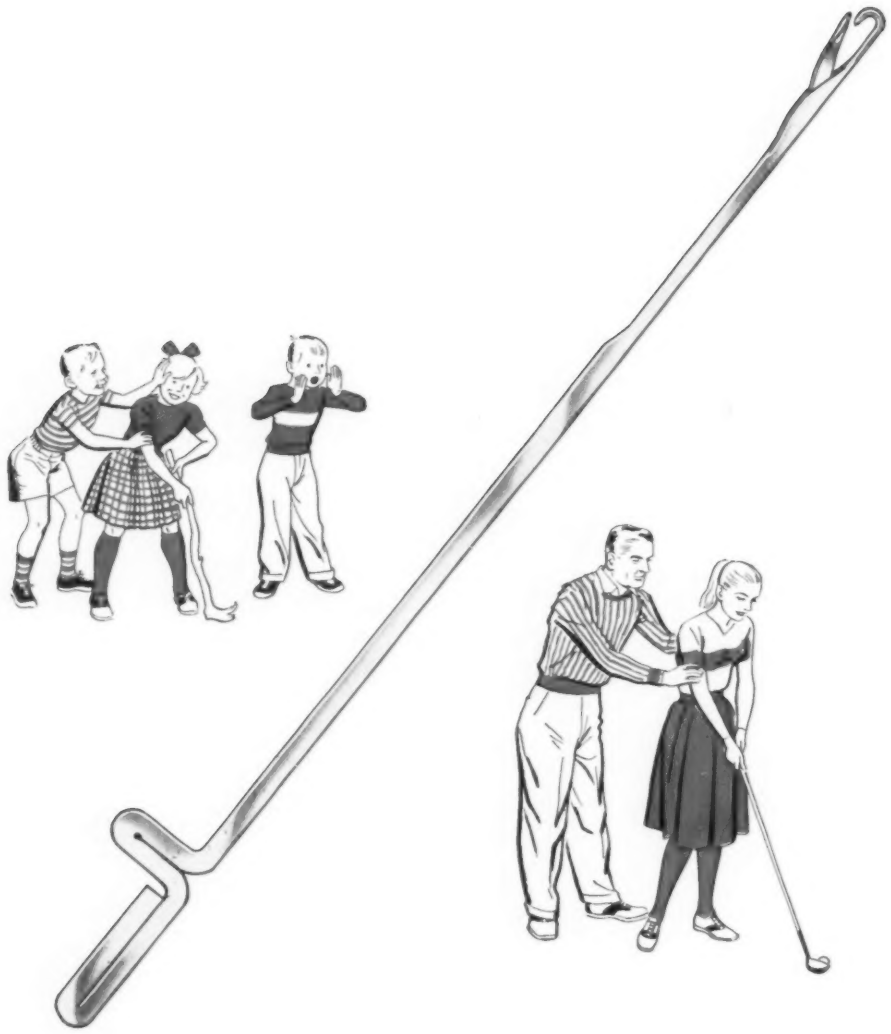
In comparing per capita consumption of hosiery in 1952 with 1957, women's use dropped from 14.7 to 13.7 pairs of anklets per person. Use of full-length full-fashioned hosiery dropped from 11.7 to 11.2. Men's hosiery use dropped from 13.7 to 10.4, or 24 per cent; children's from 7.2 pairs to 5.5, or 23.7 per cent. These changes were noted during a time when the population is steadily increasing.

The industry needs to sell two more pairs of socks to men and one more pair to each child to get back to the level of 1952. The drop in consumption is the big problem, and better quality is the cause of the drop, despite the good hose made in former years.

In the fight for the consumer

Officers of National Association Of Hosiery Manufacturers are (left to right): SEATED, R. R. Rice, Virginia Maid Hosiery Mills, vice-chairman; Nathan M. Ayers, Triangle Hosiery Co., chairman of the board; Felmont F. Eaves, Athens Hosiery Mills, vice-chairman. STANDING: Matthew C. Kurtz, assistant secretary; Reuben C. Ball, vice-president and secretary; W. F. Williamson, president.

Presiding at the children's and infants' divisional meeting was Paul Russell (left), Russell Hosiery Mills. Staley P. Gordon (center), secretary of Grace Hosiery Mills, is chairman of the Men's Hosiery Advisory Committee. Edward Heathcote, Lynne Hosiery Mills, is chairman of the Children's and Infants' Hosiery Advisory Committee.



"Follow-through"

The care that goes into the making of Arrow Latch Needles to achieve strength, smoothness, and complete freedom in latch movement is only the beginning of Arrow service.
Mill follow-through to make sure you are getting even stitches, trouble-free performance, and reduced down-time are part of the day-to-day operation of your Arrow representative.

Prompt delivery of Arrow Latch Needles, Flat Stock, and Leaded Assemblies from stock in Reading, Pa., Asheboro, N.C., and Manchester, N.H.

Wire Products Division
TEXTILE MACHINE WORKS • READING • PENNA.
In the South: Asheboro, N.C. In the North: Manchester, N.H.
Builders of Textile Machinery Since 1900

Arrow LATCH NEEDLES

The "Reading" CK-A Circular Knitting Machine • The "Reading" Tricot Machine • The "Reading 100" Full-Fashioned Knitting Machine
The "Reading" Full-Fashioned Outerwear Machine • The "Reading" Braiding Machine • Textile Spring-Beard Needles • Arrow Latch Needles

dollar, others have got part of the hosiery dollar. Nothing sells itself, and we must work harder, advertise more, and look for more markets, Mr. Ayers continued. One or two more pairs of foot covering may be sold by promotion through cooperative efforts with the NAHM, and although individual promotion and advertising helps, the industry needs unified promotion.

The Better Hosiery Seal Program quality standards have been proved, and more volume is needed for more promotion, thus indicating the need for participation of all hosiery manufacturers, he concluded.

RAYMOND ROGERS, professor of banking, New York University, told the audience that the hosiery industry has an indispensable product of universal demand, largely modern up-to-date plants, a rapidly growing market, an improved product to offer, and generally everything any industry could hope for, except common sense on the part of some members.

"Business recession or recovery, there will be plenty of business in your field in 1958. The only question is whether you will realize profits or losses on that business. And only *you* have the answer to that!" he admonished.

W. F. WILLIAMSON, president of NAHM, told the group to sell a little more hosiery by increasing consumer interest, buyer interest, and management interest. Paid space advertising is of enormous importance to accomplish a job of this kind, and strong and active support is necessary for continued success.

"We have every hope during the year for good business and in better brackets, and we have organized a considerable force to help that adjustment along. Our productive capacity is getting closer and closer to demand and we, unlike others, have no past mistakes inventory-wise to liquidate. Let us for once keep our eye on the main chance and let other people's troubles trouble other people," Mr. Williamson said.

ZENN KAUFMAN, sales consultant, explained the need for active promotion and advertising to solve the problems experienced by the men's hosiery industry. The necessity for establishing standards and to give the consumer a reason to buy the merchandise was emphasized.

Research is needed to find new ideas, products, and sales appeal items, he declared. The hosiery seal program provides standards to improve sales appeal, and steady conditioning of consumers is necessary to establish their continuing confidence.

RUSSELL KATZENMOYER explained several details of the seal program. NAHM uses funds from the program to pay costs of processing as well as to advertise to promote the program and acceptance of seal-bearing merchandise.

Mr. Katzenmoyer revealed that 90 per cent of sample failures failed to pass the wash test, and most defects revealed were points on which the manufacturer had no knowledge.

AT A MEETING of the women's hosiery division, promotional work of the Women's Hosiery Council, Chemstrand, and Du Pont was reviewed for past and future.

Jerome Mayer, sales training expert, emphasized that the formula for business success includes a product, service, price, and a salesman equipped to do the job of selling the combination. The average cost of recruiting a salesman is $5,000.00, he said.

Stretch yarns *(from page 179)*

are about 1/32" longer, which permits looser knitting at all points in both rib and frame knitting.

Making the stitch cams longer made it necessary to redesign the respective stitch cam slides in the upper cam sections and the auxiliary lower feed section. Relocation of guard cam screw holes, or a change in the guard cams which go with the respective stitch cams, was necessary to get proper clearance for the slider butts.

WHEN INSTALLING the new guard and stitch cams, make sure that the slider knitting butts will pass between the guard cam and stitch cams, without binding, at all five knitting points. The two stitch cam slides No. 211,526 in the upper cam sections should move up and down freely; the same is true of the lower auxiliary stitch cam slide No. 211,534. The writer has found that the three-stop system works well when installing these new stitch cams, guard cams, and slides.

1. Try the new slide to see if it moves freely in the slot. If not, a little polishing will fix it.

2. Attach a stitch cam and check for free movement. Polish rear of stitch cam if it binds against cam section on either side of slide.

3. Follow same procedure with guard cams.

It will also pay to check all points where the slider knitting butts leave the stitch cams and make contact with raise cams or lowering cams. A little added clearance at these points may be necessary due to the longer draw of the stitch cams.

After the change is completed, the various sections will look and function just as they did with the old, shorter cams, but all knitting will be looser. In some cases it may be necessary to use coarser ratchet wheels on the work drum takeup rolls, depending on the kind and count of yarn used.

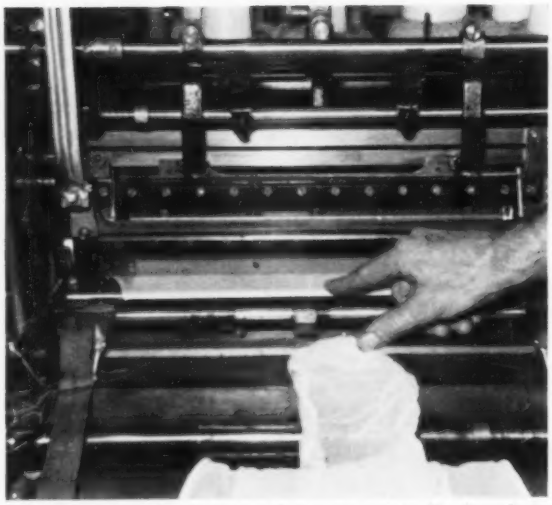
And, finally, a new long neb sinker designed to be used in conjunction with the long draw stitch cams is available. It will help to eliminate some difficulties caused by extremely loose knitting of stretch yarns.

F-F knitters: Check these

tips on welt turners

by William D. Frye
Carolina Lee Knitting Co.
Madison, N. C.

Exclusive



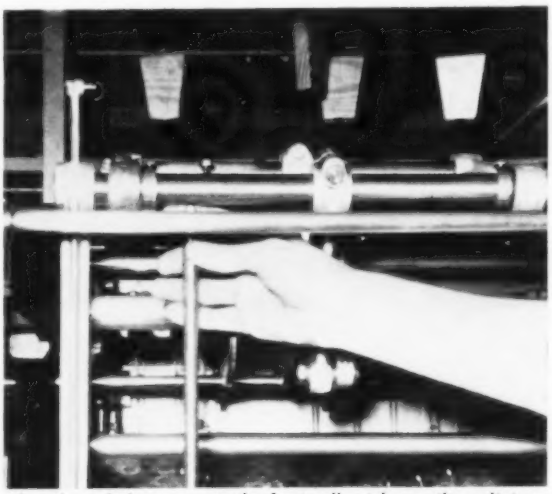
Broken needle in selvage on preceding set caused trouble shown here. It is up to the knitter or the fixer to determine why this happened.

BEFORE World War II, all welts on knitting machines were turned by hand, and this was an operation that required a certain amount of skill and speed. In turning welts the knitters would team up and help each other so as to have the least amount of machine downtime. The average knitter would have scoffed at the idea of an automatic welt turner that would be more efficient than hand turning. Today a knitting machine without automatic welt turning is obsolete.

Sometimes a machine will give a small amount of trouble on the hook-up; just enough to keep pecking away at the knitter, making waste, taking time. If there is needle breakage, the knitter or fixer will have to determine when and where this happens. Needles can be broken on the selvage in the preceding set by a bouncing friction or by a carrier that pushes against the sinkers. These broken needles sometimes will not be seen until after the hook-up on the following set.

When a fixer is called to a machine that is giving trouble he will have to determine whether this is trouble that has been accumulating a little at a time. On a machine such as this, he may lick the problem by using pliers. Here we have the old story that the knitter will have to be certain that his needles and welt hooks are spaced and in line. The needles, beards, and welt hooks should have the proper amount of opening. The sinkers must be straight to allow room for the welt hooks to pass.

If there are drop stitches on the hook-up operation, an experienced fixer should be able to tell how this came about. Since there is one welt hook for every two needles, he will look to see if the dropped stitch happened to be on the needle between the welt hook or on the loop at the welt hook. The stitch size on the first course must be regulated very carefully. If this stitch is too tight, some of the loops will be missed by the welt hooks, or sometimes needles will be broken.

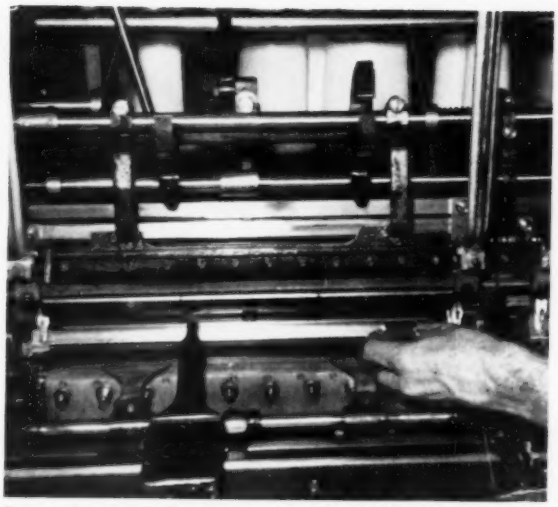


After the welt bars are set, the front roller tube on the welt turner assembly should be leveled, by using a rod gauge from the table.

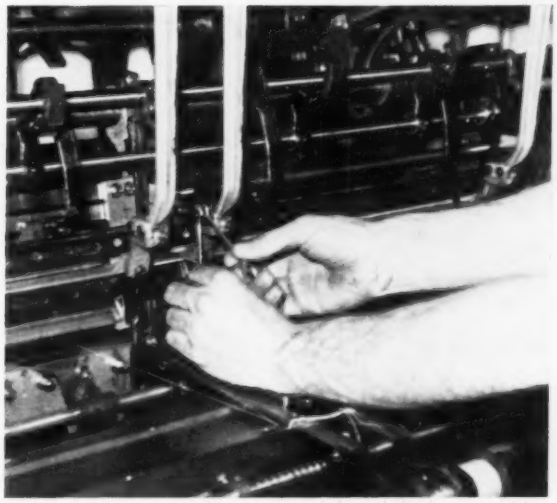
THE WELT YARN may hang on a section on the hook-up course, causing a needle bar smash. This can happen by flying yarn looping over an eyelet or by a groove cut in the carrier tube. The drag on the yarn makes a tight starting course. Sometimes needle bar smashes on hooking up the starting course may be caused by a low welt bar or a high needle bar. Correct these conditions by using the gauges.

The welt bars are sensitive and may take very little rough handling. Anytime a machine is a repeater on these needle smashes, you can assume there must be someone handling the bars roughly. Single this person out and caution him against this practice.

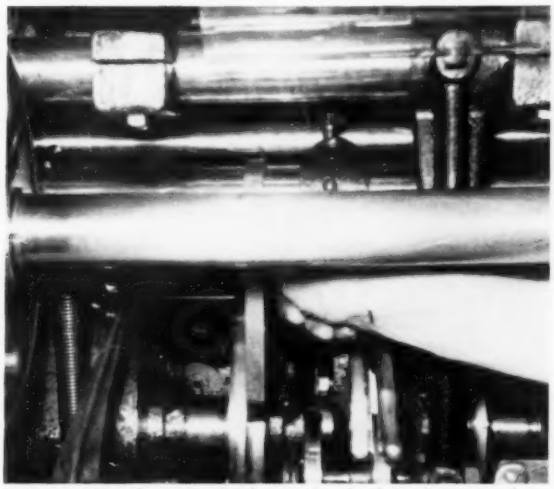
On a Lieberknecht, except late models that narrow at a high position and have no narrowing lift, the narrowing frame must be raised to 93-mm. It



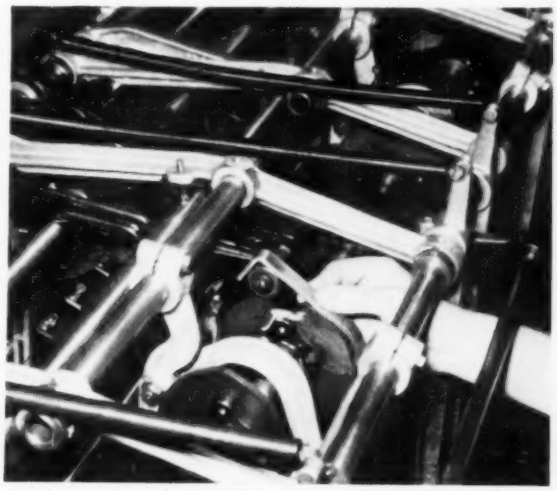
Be sure to set welt bar to correct height and distance from table. Welt bars are sensitive and will take very little rough handling.



With the welt turner clutch engaged and the welt hooks centered between the sinkers, run the guide screws in to take out side play.



In timing the welt turner clutch, put the clutch in the engaged position with the cam gauge on the joining split of the cam catch bar.



If welt turner cam shaft is off, loosen drive gear, and move the cam shaft until the gauge fits on the scribe mark of the arrestor cam.

must stop at this 93-mm position each time the narrowing is raised for the starting course or turning welts. Any variation may lead to an imperfect hook up. If this 93-mm gauge is not with the gauge box, one can be made easily from a small piece of broken carrier rod. This gauge is used by placing it between the sinkers and the bottom narrowing rod.

ANY WELT TURNER is likely to give a certain amount of mechanical trouble. In contrast to the Reading welt turner, which slides the bars in, the Kalio welt bars hang overhead out of the way when not in use. In setting the individual bars, first run in on the guide screws. In this way the bars will be free to hang without forcing them.

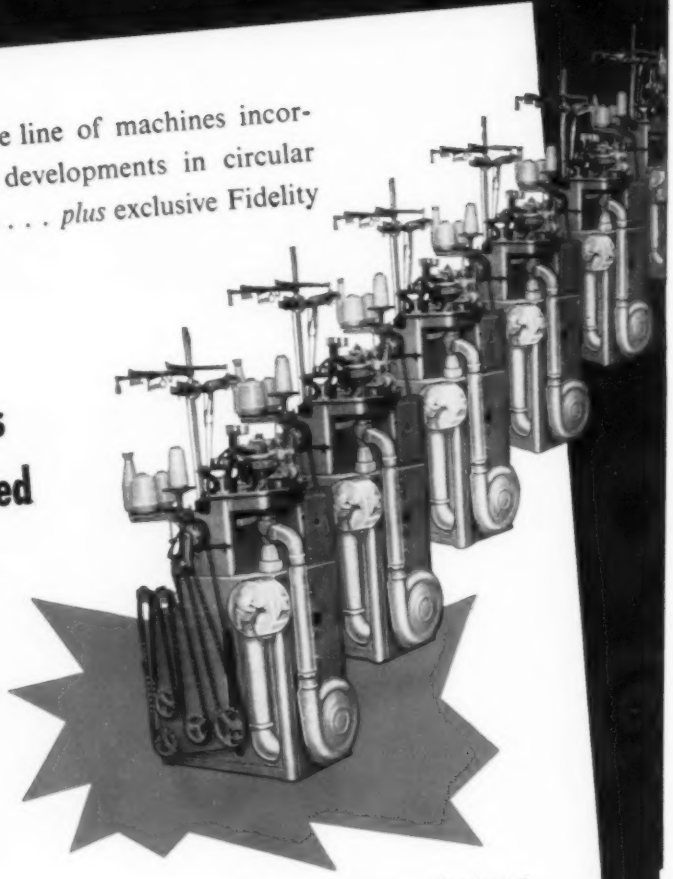
The front roller tubes on the welt turner assembly are then leveled, using a rod gauge from the table. After this adjustment, the horizontal arm set screws should not be moved for making adjustments on the welt bar. Use the adjustment screws on the bottom of the pendant arms.

After the welt bars are set, using the height block and the table gauge, set them directly over the needles on which they will work. The spacing collars must be held firmly on both the front and rear rollers. With the welt turner clutch engaged and the welt hooks centered between the sinkers, run the guide screws in to take out side play.

If no trouble is found in the welt bar settings, the timing of the welt turner clutch should be checked, using the cam gauges. The welt turner on each half of the machine is a separate, individual unit, and each must be checked for timing with the main cam shaft. Engage the clutch and move the arrester roller out

FIDELITY for SEAMLESS

Only Fidelity offers a complete line of machines incorporating *all* the outstanding developments in circular knit hosiery equipment design . . . *plus* exclusive Fidelity electronic control!



- 400 or 474 Needles
- Single or Double Feed
- Automatic Tension Device
- Plain, Mesh or S-T-R-E-T-C-H
- Individual Motor Drive with . . .
- Electronic Push Button Control

You select the performance features *you* want . . . when you select a Fidelity. See the *complete* Fidelity line in operation at our showrooms . . . or write for stocking samples today.

Designers and Builders of Intricate, Automatic Precision Machines

SINCE 1911

FIDELITY MACHINE COMPANY, INC.

3908-18 FRANKFORD AVENUE, PHILADELPHIA 24, PA.

EXPORT DEPT.: 11 BROADWAY, NEW YORK 4, N.Y. SOUTHERN REPRESENTATIVE: C. S. BRANNOCK, P.O. BOX 763, MT. AIRY, NORTH CAROLINA

of the notch of the arrester cam, pulling the machine forward manually, until the main cam shaft gauge fits in the joining split of the catch bar working cams. At this point the welt turner cam gauge should fit on the arrester cam scribe mark. Any adjustments are made by loosening the drive gear on the welt turner cam shaft and turning the cam shaft to the scribe mark.

In keeping a full-fashioned machine in good running condition, everything depends on the personnel working for the company. All mills have classes of employees ranging all the way from excellent to bad. A well managed mill will have a high percentage in the excellent class and few in the latter.

There is no such thing as digging in, getting a mill on first quality production, and then sitting back and letting it run. It is a matter of continuous vigil. Things will always be slipping back. These conditions the supervisor will have to see early and correct.

Balance of f-f hose output and demand seen near

■ "THE NEAR future will see a balance between productive capacity and demand for full-fashioned stockings," declared Textile Machine Works recently in reporting the highlights of an interim statistical survey of the knit goods manufacturing industry. "This is in marked contrast to the situation that has prevailed for the past five years."

The number of full-fashioned stocking knitting machines in the United States decreased during 1957 to a new total of 5,361 as of the end of the year. This compares with 6,127 machines at the end of 1956, the announcement indicated.

An increase of 3,504 ladies' seamless hosiery machines over the 1956 number was noted, as well as a gain of 46 full-fashioned outerwear machines.

Following are other data contained in the report:

Full-Fashioned Machines. Of the 5,361 machines in place, about 70 per cent are in the new to 10-year-old age bracket, and about 14 per cent in the 11- to 15-year-old group. The remaining 16 per cent are in the 16-year or older bracket. The median age of machines in place increased to 8.5 years, as compared with 7.8 years at the end of 1956.

51 gauge still leads the field with about 43 per cent of the machines in place, but 60 gauge has drawn closer with approximately 39 per cent.

The distribution of machines throughout the country remained approximately the same during 1957. North Carolina accounts for about 38 per cent with Pennsylvania having 23 per cent.

Mills. The total number of mills during 1957 decreased from 488 to 432. This was brought about through the liquidation of 64 mills and the addition of 8 new ones. About half of the mills liquidating were in Pennsylvania.

Seamless. Ladies' seamless hosiery knitting machines increased during 1957 to 25,487 as compared with 21,983 in 1956. The over 400-needle count category now accounts for about 23 per cent of the total. The statewise breakdown of machines in place remained relatively the same during 1957. North Carolina is far in the lead with 55 per cent of the machines.

The total number of seamless mills is now 110 compared with 104 in 1956. Of these, North Carolina has 45 per cent, other southern states 27 per cent, and Pennsylvania 21 per cent.

Outerwear. Full-fashioned outerwear machines again increased during 1957 to a new high of 519. This compares with 473 at the end of 1956. 5,776 machine sections are involved as compared with 5,147 in 1956. 10, 12, and 13 section machines account for about 69 per cent of the total in place.

The total number of outerwear mills at the end of 1957 was 106 as compared with 99 at the end of 1956. New Jersey is now first, with 27 per cent of the mills; while Pennsylvania is a close second with 25 per cent. However, Pennsylvania leads with the number of machines, having 30 per cent of the total.

Canada. Canada now has a total of 682 machines as compared with 841 a year ago. The comparative figures for machine sections are 23,057 as of December, 1956, and 19,443 as of December 1957.

48 per cent of Canada's full-fashioned stocking machinery is less than 10 years old, 25 per cent 11 to 20 years, and the remaining 27 per cent over twenty years old.

Cavitomic cotton *(from page 165)*

back beater were considered best in one mill.

One mill tried to do more cleaning at the pickers but found this made too many neps. Trash removal at pickers was helped by reducing the amount of air going to the Superior cleaner. Fan speed was reduced, and this improved the cleaning action. It was found that a back draft held droppings against the bottom grid when too much air passed through the picker.

Trouble was experienced with picker laps getting concave on one end and convex on the other. The trouble was chronic but occasionally cleared up without help. The entire front mechanism of the picker was checked for alignment in an effort to find the trouble but without success. The problem was solved by putting an oil wick on the front of the picker to moisten the lap pin before starting the laps.

Picker rooms were humidified in about half the mills represented in this discussion group, and it was agreed that evener motions on pickers should be reconditioned at least once every three months; pickers overhauled once a year.

KNITTER HINTS NO. 48

Guard against pulled threads

Wear TWO gloves whenever you pick up stockings

This battery of Kidde-Johnson Slashers is in operation at a leading southern mill.

Versatile Kidde-Johnson Warp Sizer HANDLES ALL YARNS

The all-purpose, high speed Kidde-Johnson Slasher is versatile because . . .

. . . it will slash yarns of any fiber – filaments or spuns – from the finest count for delicate fabrics to the heaviest denier tire cord.

. . . its production capacity can be expanded to meet future needs . . . drying cylinders, single or combination quetsches can be added, head ends extended and/or widened.

. . . it is constructed to fit your requirements . . . for silk system slashing (single beam to loom beam), cotton system (from several section beams to loom beam) or both.

Here are some other outstanding features . . .

1. A smooth all electric drive in single or multi-motor arrangement.
2. Loom beam rigidly supported in ball bearings close to beam flange. Will easily accommodate various width loom beams.
3. Size level, size temperature, and cylinder temperatures are precisely controlled individually or in groups.
4. Application and impregnation of size by pneumatically loaded quetsch rolls is uniform throughout the run.
5. Fingertip calibration of stretch with a stretch indicator that gives continuous indication.
6. Stainless steel lead-in and idler rolls, solution pan, botton quetsch roll, cylinders, and split rods.
7. "Teflon" coated cylinders to immunize against sticking. Also moisture content controls, viscometers, etc.

For full information on modernization of your present slashing equipment or on complete new slasher installations, call PILGRIM 8-8100 or write . . .

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS • BEAMERS
CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS • TENSION COMPENSATORS

Kidde

TEXTILE MACHINERY CORPORATION — BLOOMFIELD, NEW JERSEY

The word KIDDE is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

TC
TENNESSEE CORPORATION

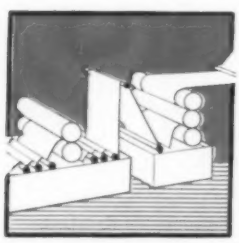
LIQUID
SULFUR DIOXIDE
HIGHEST QUALITY
SO_2

For Effective Removal of

RESIDUAL CHLORINE

Tennessee's Liquid Sulfur Dioxide Is a Most Efficient and Economical Antichlor

SO_2 accomplishes the following—Acidifies alkaline hypochlorite making it easier to wash out. Reduces chlorine to the harmless valence minus one (CI-I)! Leaves fabric acid free.



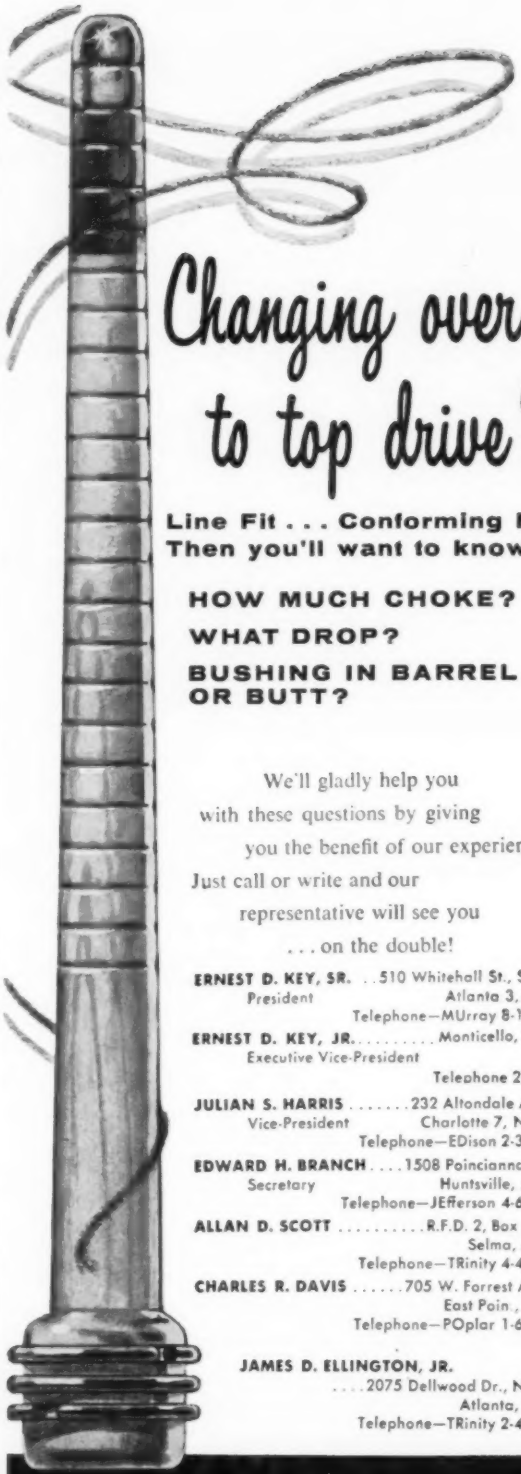
Available In:
- CYLINDERS
- TON DRUMS
- TANK TRUCKS
- TANK CARS

Tennessee's Liquid Sulfur Dioxide is also very effective as a reducing, bleaching and neutralizing agent, and pH control.

We would like to consult with you on the possibilities of Tennessee's Liquid Sulfur Dioxide in your processing.

TENNESSEE TC CORPORATION

617-29 Grant Building, Atlanta, Georgia



Changing over to top drive?

Line Fit . . . Conforming Fit
Then you'll want to know

HOW MUCH CHOKE?
WHAT DROP?
BUSHING IN BARREL OR BUTT?

We'll gladly help you with these questions by giving you the benefit of our experience. Just call or write and our representative will see you . . . on the double!

ERNEST D. KEY, SR. President . . 510 Whitehall St., S.W. Atlanta 3, Ga. Telephone—MUrray 8-1483

ERNEST D. KEY, JR. Executive Vice-President . . . . . Monticello, Ga. Telephone 2121

JULIAN S. HARRIS Vice-President . . . . . 232 Altondale Ave. Charlotte 7, N. C. Telephone—EDison 2-3055

EDWARD H. BRANCH Secretary . . . . 1508 Poincianna St. Huntsville, Ala. Telephone—JEfferson 4-6204

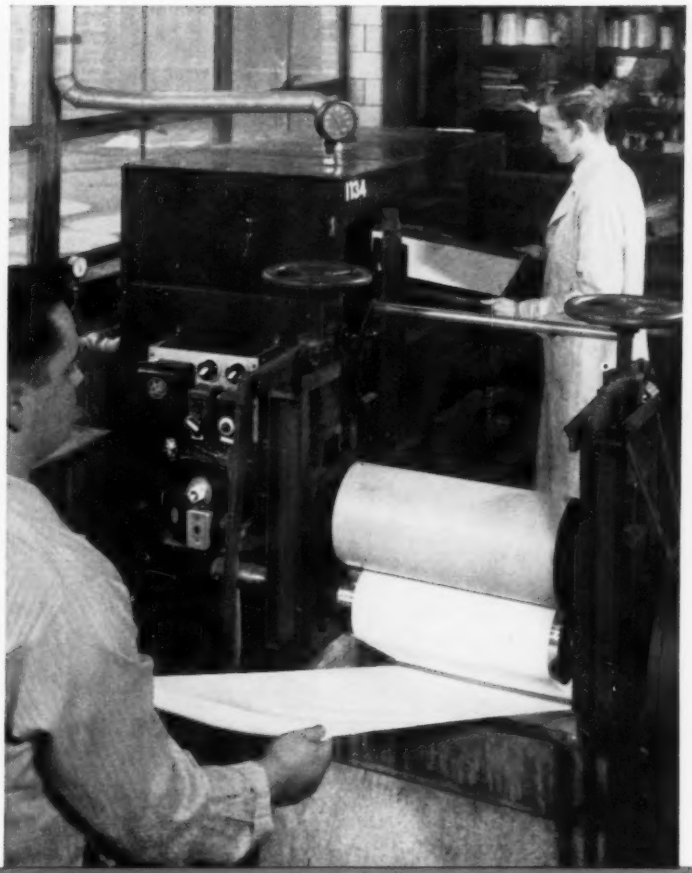
ALLAN D. SCOTT . . . . . R.F.D. 2, Box 506 Selma, Ala. Telephone—TRinity 4-4118

CHARLES R. DAVIS . . . . . 705 W. Forrest Ave. East Poin , Ga. Telephone—POplar 1-6781

JAMES D. ELLINGTON, JR. . . . . 2075 Dellwood Dr., N.W. Atlanta, Ga. Telephone—TRinity 2-4083

MONTICELLO BOBBIN COMPANY
MONTICELLO, GEORGIA
The ONLY manufacturer of Card Room Bobbins in the South

Houghton Technical Service for Textile Processing



For Textile Men Who Want New Finishing Ideas

Here, in Houghton's textile application laboratories, you can find out in advance how new resins, softeners—finishes and auxiliary chemicals of all types—will behave in your plant. Equipment like this, operating under precise laboratory controls, can duplicate almost any finishing process.

If you have a new process in development, or have a finishing problem, you can bring the benefits of this same technical service right into your plant.

How recently have you checked on new textile products and services available from Houghton? Catch up on the news right now by getting in touch with the Houghton Man in your area—or write today, outlining the kind of new ideas you'd like to try in your plant. E. F. Houghton & Co., 303 West Lehigh Ave., Philadelphia 33, Pa.

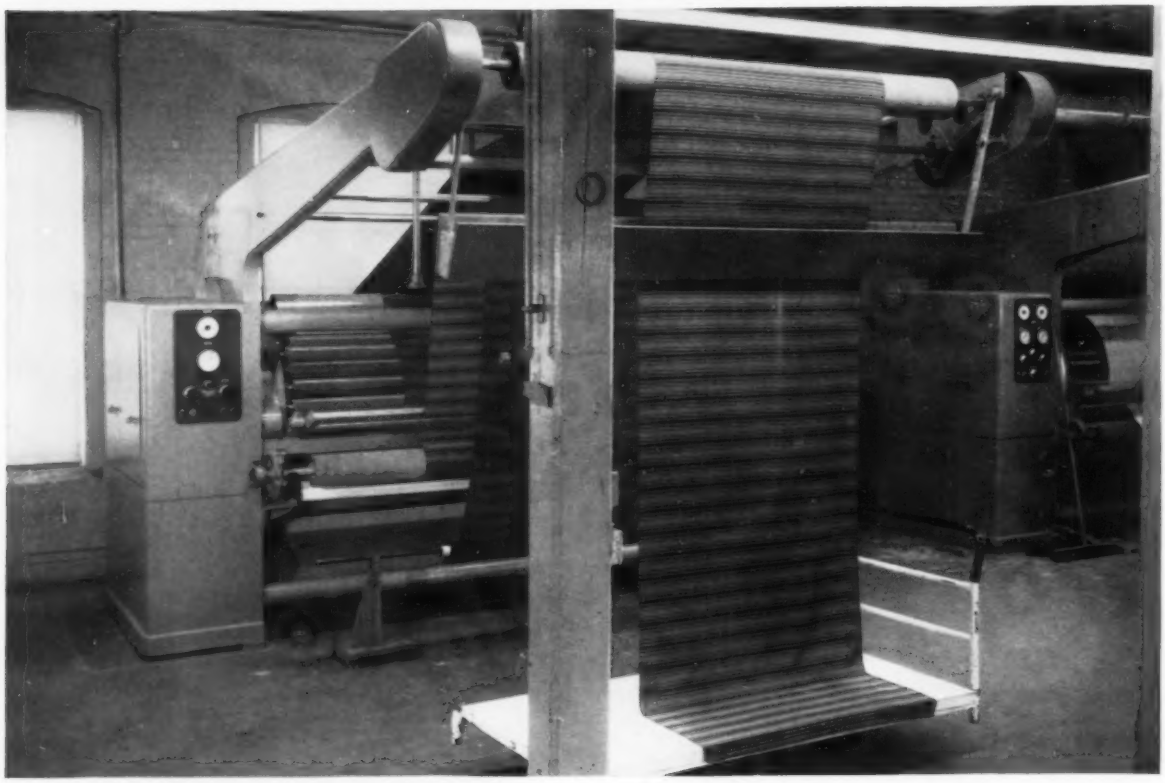
services and products of...

E. F. HOUGHTON & CO.

PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you on-the-job service . . .

Long, lofty, fluffy nap two to four times as fast on this NEW Hi-Torc SINGLE ACTING NAPPER



Famous Hi Torc precision napping controls on this new Gessner single acting napper, write a new chapter in the wet napping of broadcloths, brush finish coatings, zibelenes and suedes. Dry napping, too, or straightening the fibres of such fine fabrics as cashmeres, vicunas, and fine woolens involves nothing more than setting the controls without fuss or guess work. The napper can also be set to produce a tucked finish.

This 24 roll, torque controlled machine, with two eight roll contacts, provides a total of 16 rolls which constantly work on the cloth. The combination of these features results in an increase of production three to four times that of a conventional machine.

DAVID GESSNER CO.

WORCESTER, MASS.

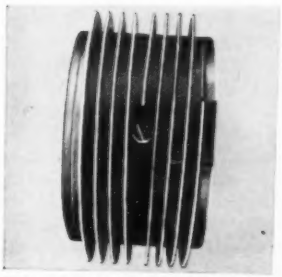
Southern Representative: Richard L. Bernard, 222 Piedmont Bldg., Greenboro, N. C.
Western Representative: E. G. Paules & Co., 1762 West Vernon Ave., Los Angeles, California
Canadian Representive: W. J. Westaway, Montreal, Quebec; Hamilton, Ontario

Gessner Improved Cloth Finishing Machines maintain a standard of performance to meet the exact requirements of your cloth finishing.

NEW PRODUCT PARADE

Machines and Equipment . . . Supplies and Services . . . Dyes and Chemicals . . . Books

Please note: Claims made in all of these announcements of new developments are of necessity based upon information furnished by the respective suppliers.—The Editors.



"Micr-O-Grind" abrasive wheels are spiralled to take off the heel of each tooth (see photo at right). The grinding head fits a conventional shaft.

Needle point produced on card clothing tooth (left) by the "Micr-O-Grind" abrasive wheel is contrasted with conventionally ground tooth.

Card grinding method reduces neps, grinding time

Now available for grinding card clothing in the mill is an abrasive wheel that is spiralled to take off the heel of each tooth and thus form an extra sharp needle point.

Mill tests show that the sharp point produced by this grinding head on the wire reduces neps by 40 per cent, increases yarn strength by an estimated 10 per cent, greatly reduces stripping cycles, and cuts grinding time by as much as 80 per cent.

Designated the "Micr-O-Grind" abrasive wheel, it fits the conventional card grinder shaft and can be used on any type of card clothing.

The sharp point is especially suitable for cotton mills and for woolen mills with difficult blends or noily stock. On cotton type cards the stripping cycl can be reduced to once per shift; on woolen cards, once per month.

The needle point on the teeth permits the stock to be released easily at the doffer so that there is virtually no beating action by the comb on the web. The sharp point also gives a gentle combing action and so does not dull as quickly. The gentler action also means greater yarn strength as the fibers remain intact.

Benjamin Booth Co., Allegheny and Janney Streets, Philadelphia, Pa.

Do you want more data? Write ◂ or use card on page 209; list F-101

Yarn carrier locking device ups winder output

A new eccentric type locking device for use on winder spindles (straight blade and arbor types) makes it easy for operators to doff full packages of yarn and start new packages, because no tool is required to lock the yarn carrier in position. This results in increased production and permits the assignment of a large number of spindles to an operator for servicing.

The device is trouble-free—there are no blades to weaken or break, no clutch to wear out or slip, and no springs to weaken or break. It is completely safe as there is nothing to cause injury to operatives.

Only a few minutes are required to install the unit which is also applicable to wind-up shafts on inspection tables, cloth slitting machines, etc.

Louis P. Batson Co., P. O. Box 772, Greenville, S. C.

Do you want more data? Write ◂ or use card on page 209; list F-102

Size spun synthetics for less

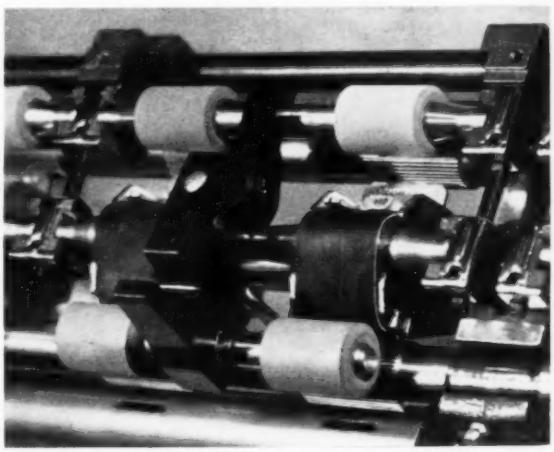
Mills using a new warp size adjuvant on yarns spun from synthetic fibers report equal or improved weaving efficiency at up to 30 per cent savings in cost.

The sodium salt of a polymerized acrylic acid resin, Alcogum WS-25 is water soluble and can be readily removed from sized fabrics. The product goes into solution readily and will pour from a faucet.

Alco Oil & Chemical Corp., Trenton Ave., & William St., Philadelphia 34, Pa.

Do you want more data? Write ◂ or use card on page 209; list F-103

Eliminates cap bars on spinning frame front line



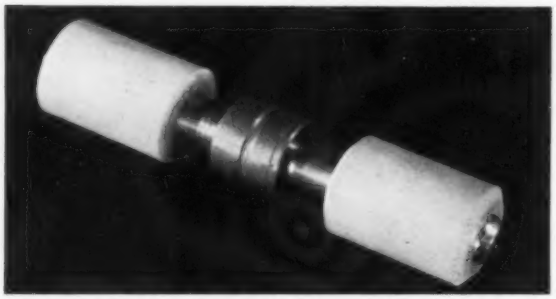
A simplified ball-bearing top roll suspension for spinning frames eliminates cap bars on the front line of rolls and can become the first step in a complete replacement of cap bars.

The new suspension assembly can be applied to the Roberts High Draft system, Saco-Lowell Roth and Duo-Roth systems, and Whitin Long Draft and Super-Draft systems.

Front and back saddles are molded from high-impact

phenolic, and when unweighted they stay fastened together and do not separate. Retainers for revolving clearers are provided in the molded parts, which are also quite smooth and lint resistant.

The top rolls contain double rows of ball bearings



which make the rolls self-aligning with the bottom roll. The twin bearings are grease packed for life and are protected from lint entrance and roll picker damage by two-piece labyrinth seals.

Roberts Co., Sanford, N. C.

Do you want more data? Write ◂ or use card on page 209; list F-104

Stronger metallic yarn

A new, high-tenacity, Mylar-base yarn immediately available in 1/32", 1/50", 1/64", and 1/100" widths offers the advantage of twice the tensile strength of standard constructions. The controlled stretch feature permits standard weaving equipment to handle this new yarn with greater ease and fewer yarn breaks.

Available in silver and light and dark shades of gold, this yarn can be used in the production of fabrics for upholstery, sweaters, bathing suits, bed spreads, towels, woven labels, etc.

Nylco Products, Inc., 530 Main St., Clinton, Mass.

Do you want more data? Write ◂ or use card on page 209; list F-105

Four new loom reeds

Advantages and construction features of four recently announced loom harness reeds are as follows:

Angle dent reeds force the warp to travel the slope of the dent, causing the warp to shift so that every end hugs the same side of every dent. This feature is especially useful with leno and marquisette weaves. Also, with the warp yarns traversing the angle of the dents, the heddles and drop wires are caused to dance continually, giving the warp ends freedom to be accurately placed in the fabric. Furthermore, the angle compensates at the beat-up for uneven tensions on the warp ends. The reeds are available in pitch band or all-metal construction.

Longer reed life and improved fabric quality are benefits of *loose spring reeds*. In addition to the normal springs soldered at both top and bottom, there is an additional spring added at the top and the bottom. These springs are not soldered, but they shorten the length of the dent wires and give them extra rigidity. Furthermore, the springs

LOCKWOOD GREENE PROJECTS IN...
KNIT GOODS

Lockwood Greene has completed over 300 engagements in the Knit Goods field and has had over 4,000 engagements in the entire textile field.

Union Underwear Company,
(Taylor Mfg. Co.),
Campbellsville, Kentucky

This new plant is the last word in production efficiency from receipt of yarn at rear end of lower floor thru knitting and bleaching to upper floor for cutting, sewing, pressing, boxing and shipping at upper floor platform shown

CONTINUOUS MANAGEMENT SERVICES FROM SITE SELECTION TO PLANT COMPLETION
LOCKWOOD GREENE ENGINEERS • ARCHITECTS
BOSTON 16, MASS. 316 Stuart Street
NEW YORK 17, N.Y. 41 East 42nd Street
SPARTANBURG, S.C. Montgomery Building
OVER A CENTURY OF INDUSTRIAL PLANT DESIGN EXPERIENCE • BROCHURE ON REQUEST

act as cushions, permitting the dents to return to their original spacings after being forced aside. Available in either pitch band or all-metal construction, the reeds reduce reed marks and dent breakage.

Offering advantages in weaving economy, *rigid metal reeds* are equally suited for woolen, worsted, or other weaving operations. They are machine wound with spring wire over a substantial half-round metal band, producing a rib 5/16" in diameter. Both the ribs and combs are completely filled with solder. On top of these ribs and combs are added shaped metal tubes to increase reed rigidity.

A *rigid pitch reed* which offers 100% greater strength is built with a half-round metal band covering each wooded rib. These bands are formed to fit into a groove in the center of the rib and are secured with the conventional pitch-impregnated twine. They are recommended for use in weaving wide sheetings, duck, woolens, worsteds, wide elastic fabrics, etc.

Steel Heddle Mfg. Co., 2100 Allegheny Ave., Philadelphia 32, Pa.

Do you want more data? Write ◆ or use card on page 209; list F-106

Wool blending system has 5,000-lb bins

A semi-mechanical blending system for woolen mills blows picked, unoiled wool into circular bins which hold about 5,000 lb each. (Refer to photo.) A rotary spreader at the top of the bin distributes the stock. By opening ports at the bottom of the bin, the stock is reblended into a second circular bin. From this bin the wool goes into a second picker where it is oiled by a Vortex oiler and then either baled or blown into bins behind the card feeders.

Atkinson, Haserick & Co., Inc., Framingham, Mass.

Do you want more data? Write ◆ or use card on page 209; list F-107

Tester aids in evaluation of non-woven fabrics

The Scott Model B "Internal Bond" tester is being used for evaluation of non-woven fabrics. The instrument pulls the faces apart to determine internal cohesive strength.

The method of test is to laminate the material on each side to a pulling clamp exactly 1 inch square. Lamination is by means of a special pressure-sensitive, double-coated tape applied under pressure of 50, 100, 150 or 200 lb per sq in.

An integral supply of tape is provided by a pressure-sensitive tape dispenser built into the tester in alignment with the sample fixture. This feeds tape into the fixture so that a single strip serves five samples. Each sample is laminated to a 1 x 1 inch steel bar at the bottom and at the top to a 1 x 1 inch 90° aluminum angle.

A unique method of multiple specimen preparation saves the technician's time and assures uniformity, five specimens being laminated to the clamps simultaneously

EXCLUSIVE U. S. SELLING AGENTS

WATSON & DESMOND

P. O. BOX 1954 CHARLOTTE, N. C.

NEW PRODUCT PARADE

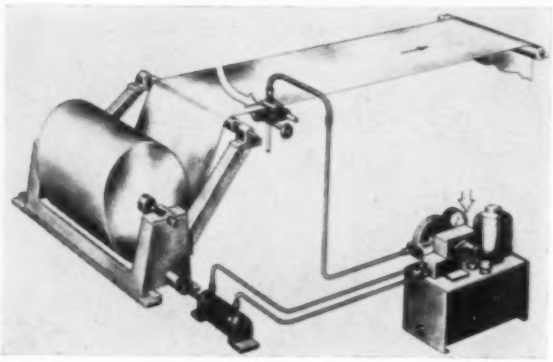
by a single motion of the pressure control lever.

The internal strength of the material under test is evaluated by measuring its resistance to a pendulum which swings against the vertical angle of the 90° top clamp and splits the specimen.

Scott Testers, Inc., 60 Blackstone St., Providence, R. I.

Do you want more data? Write ◀ or use card on page 209; list F-108

Versatile, quick-responding web guide



Sensitive to any change, quick in response, and stable in operation are advantages offered by North American web guiding equipment which can be used for unwind or payoff control (see accompanying illustration), intermediate guiding, and wind-up control. The control uses a non-contact method of edge detection which is safely applied to even a delicate film of polyethylene.

A hydraulic relay operates on the hydraulic jet principle with a completely sealed and pressurized hydraulic power circuit (50 to 750 psi) which permits installing the relay in any position or location with respect to the hydraulic pump and reservoir. The hydraulic volume output of the relay is determined by two precisely-made internal parts. For the job at hand the manufacturer supplies the relay with the one of seven sets of internals that gives the optimum volume output.

The North American Mfg. Co., Hydraulic Controls Div., 4455 E. 71st St., Cleveland 5, Ohio.

Do you want more data? Write ◀ or use card on page 209; list F-109

Automatic yarn sample winder speeds color checks

The AVC Master Winder is useful in winding card samples of spun and filament yarns for presentation to an instrument such as the Colormaster Differential Colorimeter, enabling sample colors to be measured quickly and controlled.

An automatic counting device permits the operator to pre-select the number of layers desired of the material under test. When this number is reached, the winder stops automatically.

Manufacturers Engineering & Equipment Corp., Hatboro, Pa.

Do you want more data? Write ◀ or use card on page 209; list F-110

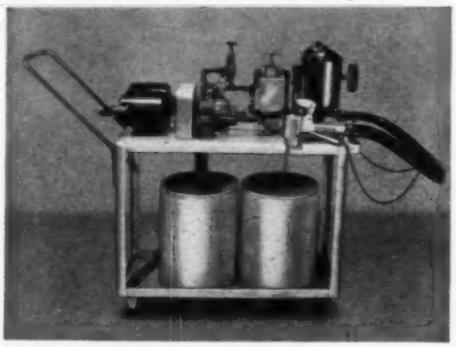
It's Here! **The New**

Wicaco Spindle Oiling Machine

The all-new Wicaco Spindle Oiling Machine fulfils the popular demand for a more efficient and economical spindle oiler.

IT HAS THESE OUTSTANDING FEATURES

- ★ Smaller than previous models—it can go anywhere a man can walk.
- ★ Light weight—it can be pulled along narrow aisles easily.
- ★ Economical—lower first cost and inexpensive operation.
- ★ New style, improved filter system cleans old oil for reuse and longer life.
- ★ Greater efficiency—operates with as little as one gallon of oil, filters the old oil and returns it for further use, or flushes out the old oil and replaces it with all new oil.
- ★ Complete flexibility—different oils may be used interchangeably by simply switching oil containers.
- ★ New filter gauge tells when filters need changing.
- ★ Relief valve permits full control of pressure from 0 to 35 lbs.

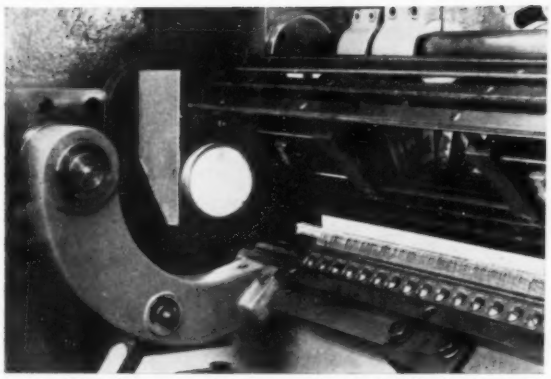


ORDER ONE TODAY
AND SEE HOW IT WILL IMPROVE
***YOUR* MAINTENANCE OPERATION**

WICACO MACHINE CORPORATION

Designers and Manufacturers of Precision Machinery and Parts Since 1868

4800 Stenton Avenue, Wayne Junction, Philadelphia 44, Pa.



Warp knitting machine equipped with the "Knitlite."

Helps weavers and knitters spot broken ends

Recently introduced in England by Meiners Optical Devices, Ltd., were two new types of visual detection devices which are now available to mills in the U. S. through a sales and service agent in this country:

(1) The "Knitlite" for warp type knitting machines which enables immediate detection of broken threads or damaged needles and improved visibility for inside work such as gating, replacing needles, and setting up a new warp; and

(2) The "Loom-Lite" reed and heddle illuminator which makes drawing-in broken warp ends relatively simple and reduces eye strain (similar shades are set out in bold contrast and different colors can easily be checked for pattern).

Easily fitted to all warp type knitting machines, the "Knitlite" consists of a housing with lamp and reflector head fitted with a mirror and lens. Light source is a mercury vapor lamp which is projected through the optical system to the entire length of the knitting elements. The guide and needle bars are clearly visible, and the individual needles and threads stand out in bold relief. Even dark threads stand out due to the special spectrum of the mercury lamp.

The "Loom-Lite" consists of a tubular optical lamp housing fitted with a lens and low voltage lamp mounted on a rail the length of the loom frame. The light is aimed at a movable mirror, also on a rail, set at a 45° angle reflecting the beam to the reeds and through to the heddles.

Vac-U-Max, 1 Montgomery St., Belleville 9, N. J.

Do you want more data? Write ◂ or use card on page 209; list F-111

How to eliminate rug label inventory problems

All rug label variables such as wool content, quality, name, color, size, etc., can be marked clearly and changed rapidly on the Markem Model 45A machine, thus preventing the waste and added expense of an excessive label inventory as well as time delays caused by outside printing.

Large size acetate satin heat seal rug labels with all variables can be marked neatly and uniformly at operating speeds of 20 or more per minute. The printing head will accept fast-change Markem type bars, masterplates or rubber plates.

Markem Machine Co., Keene 47, N. H.

Do you want more data? Write ◂ or use card on page 209; list F-112

Bargaining for bicarb or ppt. $CaCO_3$?

(PURE AND UNIFORM, OF COURSE)

...then check with Wyandotte

Wyandotte Bicarbonate of Soda meets U.S.P. XV standards. In fact, it's the same high-quality, pure bicarb that you find on drug-store shelves, only priced at carload savings. Wyandotte Bicarb comes in several grades to meet all textile requirements . . . from buffering or scouring agent to dye-bath assistant and water softener.

Wyandotte PURECAL* (precipitated calcium carbonate) is known for its whiteness. It's ideal as a weighting and finishing agent. The unique precipitation method makes it pure and uniform, and unlike most precipitated carbonates, virtually free from iron, magnesium, alkali salts, as well as abrasive materials. Meets U.S.P. XV standards.

For complete data on Wyandotte Bicarb or PURECAL, and qualified technical assistance on how best to apply these products to your process, call our nearest branch office or write: *Section TI, Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

*Reg. U.S. Pat. Off.

Wyandotte CHEMICALS

MICHIGAN ALKALI DIVISION

New dyes and chemicals

Yarn conditioning emulsions made from Laurel Hydrocop and 3B Softener lubricate the yarn to assure smooth running and even stitches in knitting, give a softer and better cone which reduces the number of pulls and sloughs off the cone, and condition the yarn to make it stronger with fewer breaks. Suitable for natural, bleached, or dyed yarns, the emulsion is easily prepared, stable, and may be applied in the conventional manner.

Laurel Soap Mfg. Co., Inc., Tioga, Thompson, and Almond Streets, Philadelphia 34, Pa.

Do you want more data? Write Supplier or use card on page 209; list F-113

Fulling and scouring agent. An amine-fatty acid condensation product, recommended for raw wool scouring, fulling and scouring of woolen and worsted piece goods, and scouring of cotton, rayons, and acetates, is known as S. D. 200. Stable to hard water, it is useful in dyeing yarns and fabrics, and for soaping off prints. When used with soap, it prevents the formation of hard soap curds.

Laurel Soap Mfg. Co., Inc., Tioga, Thompson, and Almond Streets, Philadelphia 34, Pa.

Do you want more data? Write Supplier or use card on page 209; list F-114

An aftertreated direct navy dye, suitable for use on cotton knitgoods, has good all-round fastness properties. Known as Cuprofix Navy C-LW p.a.f., it is recommended for shades with maximum resistance to repeated washings.

Sandoz, Inc., 61-63 Van Dam St., New York 13, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-115

A polyvinyl acetate emulsion for textile finishing exhibits high storage stability and gives maximum body and stiffness on cellulosic and synthetic fabrics. Designated Hartoresin NV, its uses include snag-resistant finishes on hosiery, stiffening lace nets, anti-curl treatment for tricot knits, and bodying agent for resin-treated cottons.

Hart Products Corp., 1440 Broadway, New York 18, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-116

A durable mothproofing agent, containing as its active ingredient a chlorinated hydrocarbon with an epoxy group in the molecule, is Moth Snub D Conc. Durable for life of garment to drycleaning and laundering, the agent is resistant to perspiration, hot pressing, and abrasion; does not affect hand or appearance; does not cause odor development; and is economical. It is a stable white emulsion which is added directly to dye bath at the start of dyeing operation.

Arkansas Co., Inc., P. O. Box 210, Newark 1, N. J.

Do you want more data? Write Supplier or use card on page 209; list F-117

A black dye of the fiber-reactive type for printing and dyeing cotton and rayon produces a clean black shade with good light and wash fastness. Designated Cibacron Black BG, its use in printing patterns with other Cibacron dyes eliminates the problem of adding a different type of dye to obtain a good black. It is also useful for piece dyeing by pad-steam, pad thermofix, and exhaust methods.

Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-118

Brilliant turquoise blue shades of very good fastness to light and washing are produced on cellulosic fabrics by Procion Brilliant Blue H7G which can be applied by dyeing and by printing (steaming and non-steaming processes). Either pad-dry-steam or hot batchwise procedures in conventional equipment at temperatures in the 185-212 F range may be used.

Arnold-Hoffman & Co., Inc., Providence, R. I.

Do you want more data? Write Supplier or use card on page 209; list F-119

Two cationic softeners, Ahcovel T and Ahcovel P, are commercially available. Ahcovel T, a pourable, fast dissolving paste, performs effectively on cotton and manmade fibers. Developed especially for use with cyclic urea resins, it is of merit in both pure and resin finishes. Used with resins, it imparts lubrication and softness and higher tear strength. Ahcovel P, a paste which disperses readily in water, is durable, resistant to scorching or heat discoloration, and imparts a soft hand. Recommended for application to cotton or rayon, either as pure finishes or as plasticizers in resin formulations, it is available as a concentrate.

Arnold, Hoffman & Co., Inc., Providence, R. I.

Do you want more data? Write Supplier or use card on page 209; list F-120

Identifies physical properties of starches

The "Corn Industries Viscometer" accurately measures and records the consistency of starch pastes so that physical properties of starches can be determined. Quality control tests can be completed at a rate of about three per hour, and the results can be determined to a repeating accuracy of plus or minus 1%.

The instrument consists of a stainless steel beaker immersed in a temperature-controlled water bath. A propeller stirs the paste placed in the beaker. As the water temperature is raised, the viscosity of the paste varies and the changes cause the propeller to turn slower or faster. The differential torque is transmitted to a dynamometer and is registered as a pen traces on a continuously moving paper graph recorder.

A Gelometer attachment for use with the Viscometer employs the embedded disk method of measuring rigidity and breaking strength of gels.

Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, Ill.

Do you want more data? Write ◆ or use card on page 209; list F-121

The Laurel Leaf

BUSINESS MAGAZINE EDITION

NEW PRODUCT PARADE

SPINOL RLM

Rarely before have textile men been so enthusiastic over a Laurel product as they are with SPINOL RLM!

A really fine anti-static lubricant, Laurel SPINOL RLM is versatile . . . having solved many knotty problems of processors throughout the industry.

One user reports that Laurel SPINOL RLM enables him to card Orlon where before it was impossible to form a lap. His webs literally fell apart.

Another says its improved, viscosity properties make SPINOL RLM so much easier to use. Forming a solution in *any* proportion with water, the viscosity is nearly constant — regardless of the degree of dilution.

Others are amazed at the improved handling properties of SPINOL RLM when used as a thread lubricant — especially on multi-ply Nylon. And, they add, the improved viscosity-control makes simple its application on coning machines.

Another user gratefully relates that a particularly difficult problem in running fine count cotton yarns was solved when he tried Laurel SPINOL RLM.

Perhaps *you* have a problem wherein this superior and stable Laurel anti-static lubricant will provide the answer. Write us for your free sample, and be an enthusiast, too.

Laurel Brand

Laurel SOAP MANUFACTURING CO., INC.

TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

Warehouses:

Paterson, N. J., Chattanooga, Tenn., Charlotte, N. C., Greenville, S. C.

SOLVE WARP SIZING PROBLEMS and SAVE 30%

- *Having difficulty weaving spun warps of—*

  Dacron-Cotton
  100% Acrylic Fibers
  Other Synthetic Blends?

- *Do your spun synthetic fiber sizing costs seem unusually high?*

If so—ALCOGUM WS-25 will help you.

Because:

ALCOGUM WS-25

★ Provides equal or improved weaving
★ Saves 30% or more in cost of sizing materials
★ Goes into solution easily
★ Dissolves readily—easily removed from fabrics
★ Pours readily for easy handling during use

TYPICAL SAVINGS WITH ALCOGUM WS-25

WARP SIZE COSTS		
PERCENT SIZE PICKUP	COST/100 LB. UNSIZED YARN	
	4 : 1 Starch Gum : PVA	8 : 1 * Starch Gum : ALCOGUM WS-25
12	$2.76	$1.91
15	3.45	2.38
16	3.68	2.54
18	4.13	2.87
22	5.06	3.50
24	5.51	3.81

* typical formula (100 gal.): Starch Gum 150 lb.
ALCOGUM WS-25 30 lb.
Wax 8.5 lb.

MILL PERFORMANCE

ALCOGUM WS-25 is providing outstanding weaving efficiencies to Dacron-Cotton and 100% Acrylic warps. The savings shown in the table are being realized in mill operations.

In mills using a high starch gum pick-up without an adjuvant, ALCOGUM WS-25 formulations provide equal weavability at lower cost and lower pickup.

Our sales and technical staffs will gladly assist you.

Distributor for Firestone Liberian Latex

ALCO
OIL & CHEMICAL CORPORATION

General Office and Manufacturing Plants
Trenton Avenue and William Street
Philadelphia 34, Pa. GArfield 5-0621

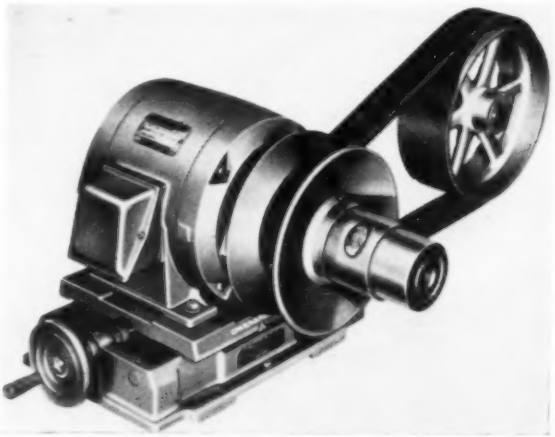
Equipment briefs

A new wood or concrete floor seal for heavy traffic areas lasts twice as long as most heavy-duty finishes. Known as Tennant No. 15 Heavy-Duty Floor Seal, it provides a light, semi-lustrous film that does not darken with age. Offers high resistance to rubber and friction burns, abrasion, and moisture and dirt penetration.

G. H. Tennant Co., 721 N. Lilac Dr., Minneapolis 22, Minn.

Do you want more data? Write Supplier or use card on page 209; list F-201

Variable-speed motor pulleys designed for applications from ½ through 15 hp, with up to 4 to 1 ratios of speed variation, offer advantages of simplicity, precision, and



lower cost. Disk assemblies have but three main parts; a spring automatically maintains correct belt tension at all output speeds; one lubrication point services entire assembly. Compact motor bases enable speed settings to be made with ease and accuracy.

Reeves Pulley Div., Reliance Electric & Engineering Co., 1225 Seventh St., Columbus, Ind.

Do you want more data? Write Supplier or use card on page 209; list F-202

A nylon-enclosed mercury switch recently placed on the market is versatile, withstands shock, and is highly resistant to the effects of water, oil, alkalis, and acids. Can be used with any application which provides a moderate type of tilting action, such as with door interlocks, foot pedals, and slow-moving cams. Contact arrangement is single-pole, single-throw.

Micro Switch, a division of Minneapolis-Honeywell Regulator Co., Freeport, Ill.

Do you want more data? Write Supplier or use card on page 209; list F-203

Fractional hp Flexidyne dry fluid drives and couplings are now available and recommended for use with light machines subject to jam-ups or to enable small motors to handle heavy starting loads. Operating advantages of the drives (identified as No. 5D) and couplings (No. 5C) include cushioned starting, 100 per cent efficiency at full load, and protection against overload.

Dodge Mfg. Corp., Mishawaka, Ind.

Do you want more data? Write Supplier or use card on page 209; list F-204

Faster bulk materials handling is offered in the Silent Hoist Lift-O-Krane. Built for quick handling of shipments of materials in collapsible containers, the gasoline-powered (other power units are optional) trucks can be turned around in an aisle no wider than the machine. A versatile unit, it serves as a fork lift truck, ram truck,

and mobile crane. Conversion from one type to another can be accomplished in five minutes.

Silent Hoist & Crane Co., 841 63rd St., Brooklyn 20, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-205

Soft green and light copper solution-dyed acetate yarns have recently been announced. Designated as Celaperm Willow Green C-69 and Copper Leaf C-70, respectively, they are being used in fabrics for home furnishings, women's apparel, and men's shirtings.

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.

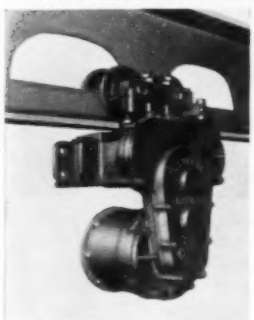
Do you want more data? Write Supplier or use card on page 209; list F-206

Accurate measurement of flow and level of bleach and dye liquors, etc., is provided by the Taylor 205T Volumetric Differential Pressure Transmitter. Sensing elements directly contact the fluid in the pipe or tank, at two points, and relay the pressure differential to the secondary portion. Since conventional lead lines are not required, the transmitter can be mounted at ground level with sensing elements overhead. Risk of danger to maintenance personnel is eliminated, and transmitter is free from damage or shutdown caused by corrosion, plugging, etc. The apparatus incorporates simple range and zero adjustment, effective damping against pulsations and vibrations, and complete overrange protection in an accurate, sturdy, and dependable means of measurement.

Taylor Instrument Companies, Rochester 1, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-207

A new overhead tramrail tractor, designated as Type "MT," can be used to great advantages as a single motor drive for one or more carriers in a train and can be used for motorization of hand power cranes and carriers. Especially adaptable for tramrail materials handling systems that have inclined tracks, it is recommended for floor controlled carriers or cranes and on automatic dispatch units. A power and free attachment is available.



Cleveland Tramrail Div., The Cleveland Crane & Engineering Co., Wickliffe, Ohio.

Do you want more data? Write Supplier or use card on page 209; list F-208

A multi-channel recording instrument for charting the frequency and length of down time of looms, knitting machines, spinning and roving frames, etc.; the number of units produced by a battery of such machines, the frequency with which each has to be attended, and many other applications where control or precise information is desirable, is available. Called the Lind-Recorder, it is made in two sizes: one with 68 recording channels; one with 44.

Lindly & Co., 248 Herricks Rd., Mineola, N. Y.

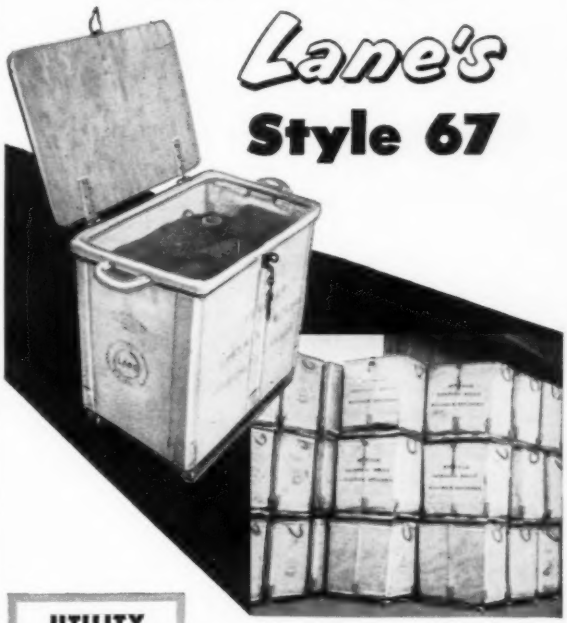
Do you want more data? Write Supplier or use card on page 209; list F-209

A heat seal paper which permits sales messages to be applied to garments, knit or woven, stays on through all types of handling and flexing, yet peels away without a trace of gum residue, paper splitting, or fabric damage. Called Imac Tex, the paper can be printed into large colorful labels carrying such information as brand name, important sales features, washing or cleaning information,

INTER-PLANT SHIPPING

Been looking into the economy of canvas hampers? You owe it to yourself to give some consideration to

Lane's Style 67



UTILITY Style 67 has proven extremely versatile throughout the whole inter-plant shipping operation, handling everything from raw goods to finished product.

CONVENIENCE Furnished with hinged wooden top and locking hasps, it nests when empty or supports other hampers when loaded for space-saving both in transit and in storage.

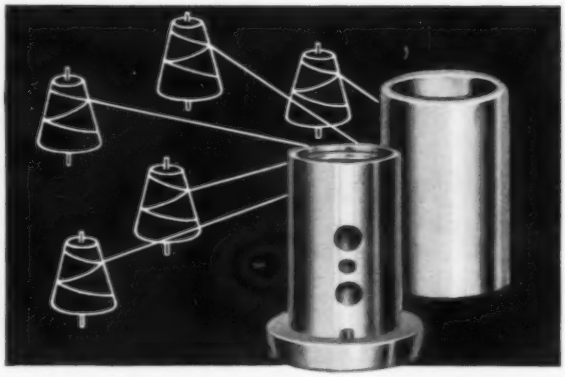
ECONOMY Its completely smooth interior prevents snagging or chafing of delicate fabrics or yarns. Style 67 is light weight; cuts shipping costs—makes hauling easier. Made from the finest leather-reinforced duck over special spring steel frame, plus the manufacturing know-how of Lane's sixty years of experience. It has an outstanding record of service and durability. Style 67 guarantees your best buy.

Style 67 is available in 6 standard sizes
From 28" long, 20" wide, 16" deep
To 40" long, 28" wide, 30" deep
INSIST upon Lane
and you insist upon the finest

Canvas Basket Craftsmen Since 1894

Lane

W. T. Lane & Bros., Inc., Poughkeepsie, New York



Johnson Bronze offers quick delivery on a full line of high quality Textile Replacement Bearings

Johnson Bronze can deliver a large variety of textile machinery replacement bearings from stock. These special bearings are made to the same specifications as the originals which they replace, and will give the same satisfactory service.

The fast Johnson service on bearings for all types of textile machinery, and the high quality of their products make Johnson Bronze your best source for replacement bearings. Write for free literature, requesting Folder JBL-9. Johnson Bronze, 530 S. Mill St., New Castle, Pa.

JOHNSON Bearings

Johnson Textile Bearings

Subsidiary: Apex Bronze Foundry Co., Oakland, Cal.

DORNSFIELDS' PATENT

ATLAS BRAND

EMERY FILLET

STOCKED BY

THE PRINCIPAL MILL SUPPLY HOUSES AND CARD MAKERS

size, etc. Applied with a warm iron, the paper has ten times the label pull of conventional gummed labels.

Nashua Corp., Nashua, N. H.

Do you want more data? Write Supplier or use card on page 209; list F-210

A CO_2 fire extinguisher weighing device reduces the possibility of human error in the periodic fire extinguisher inspection. The Silent Sentry has a clearly observable indicator which registers "Refill" when approximately one-fourth of the CO_2 charge is missing (through leakage or through use). Manufactured in two basic sizes for handling all types of extinguishers now being made, the device is designed for easy, rapid wall installation.

Mel-Rod Mfg. Co., 11616 Hart St., North Hollywood, Calif.

Do you want more data? Write Supplier or use card on page 209; list F-211

A line of sleeve bearing a-c motors from ¾ through 15 hp feature a "Liquimatic" bearing design which employs Permawick, a fluid-fiber material that combines with oil to form a fluid mass that is extruded into the bearing cavity. Performance tests show that it holds oil

up to three times longer than felt wicking, to promote longer bearing life. The polyphase motors, designed for quiet operation in air conditioning and pumping applications, are available in all standard enclosures for operation on all standard NEMA voltages from 208 through 550 volts.

Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio.

Do you want more data? Write Supplier or use card on page 209; list F-212

An electronic counter is designed for placing between existing electronic or electro-mechanical counters and the process(es) they record. By using a 10-count electronic tube, the SD-1 Electronic Decade Counter transmits only one impulse for every ten it receives. The wear on existing counters is thus reduced proportionately.

Post Machinery Co., Electronic Products Div., 140 Elliott St., Beverly, Mass.

Do you want more data? Write Supplier or use card on page 209; list F-213

Constant-level oilers for use on ring-oiled and anti-friction bearings, pillow blocks, gear boxes, pump housings, etc., use the liquid-level principle. Designed to permit use of heavier oil where needed, for adjustable oil level in the reservoirs, with high surge level and a special air intake, the Style CR oilers are available in capacities from two ounces to one gallon of oil.

Oil-Rite Corp., 2388 Waldo Blvd., Manitowoc, Wis.

Do you want more data? Write Supplier or use card on page 209; list F-214

A marking machine makes instant-drying imprints on surfaces such as plastic bags, labels, box wraps, etc. Called the Markem Model 45H, with production speeds up to 90 imprints per minute, it imprints with a thermostatically controlled printing head and permits bags, wraps, and labels to be handled immediately after marking. The maximum imprint area with masterplate or type bars is 6 9/16" x 2 5/16"; with rubber plates, 6 9/16" x 2 7/16". The machine is bench mounted.

Markem Machine Co., 150 Congress St., Keene 49, N. H.

Do you want more data? Write Supplier or use card on page 209; list F-215

Iudustrial water coolers, for closed system applications where process water temperatures are critical, save up to 95% of the water normally used for industrial cooling. The complete line of coolers includes three styles: (1) centrifugal fan draw-through units; (2) centrifugal fan blow-through units; and (3) propeller fan blow-through units. Applications include cooling water for air compressors and other types of water-jacketed equipment.

Baltimore Aircoil Co., Inc., P. O. Box 7322, Baltimore, Md.

Do you want more data? Write Supplier or use card on page 209; list F-216

A flow meter design permits coverage of flow ranges from a fraction of a cubic centimeter to 40 gallons per minute with only three meter sizes. The metering tubes of the 2700 series can be "snapped in" without the use of any tools and without disconnecting or disassembling the meter. Cleaning and range changing are reduced to simple and quick routines. Additional features include: (1) predictable calibration performance; (2) 360-degree rotation of end fittings; (3) stainless steel enclosures with safety vents; (4) safety glass windows; and (5) wide variety of corrosion-resistant materials.

Fischer & Porter Co., 995 Warminster Rd., Hatboro, Pa.

Do you want more data? Write Supplier or use card on page 209; list F-217

A heavy duty, automatic, power-operated guillotine is designed to measure and cut and count roll and coil stock to accurate lengths. Called the Jaco Autogil, it will cut plastics, paper, textiles, etc., and is available in two models: model 5 for materials up to 5" in width; and model 15 for materials up to 15" in width. The units may be selected to cut from a fraction of an inch to 96" (infinitely variable) and to handle thicknesses up to 3/16" at 120 cuts per minute.

Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.

Do you want more data? Write Supplier or use card on page 209; list F-218

A 10-key "personal calculator" that adds, subtracts, multiplies and divides, yet weighs only six pounds, is manually operated. Having no handle in the ordinary sense, its actuating bar of the BDC Contex is depressed with the palm of the hand without removing the fingers from the keyboard. The machine attains speeds that equal or exceed those of electric machines.

Bohn Duplicator Corp., 444 Fourth Ave., New York 16, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-219

A fork truck pusher attachment, specifically designed for use on the electric 2000-lb and 3000-lb capacity Cargo Scout trucks, provides a means for mechanically unload-

GEARS TO YOUR SPECIFICATIONS

BY FERGUSON

Largest exclusive gear manufacturing plant in the South. An organization with thirty-five years experience in the manufacture of custom cut gears. Textile and Industrial Gears for every purpose, from Iron, Steel, Bronze, Rawhide, Bakelite.

For information or quotation, contact your nearest Sales Engineer or write 529 Airline Avenue, Gastonia, N. C. No obligation whatsoever.

FERGUSON GEAR COMPANY
GASTONIA, NORTH CAROLINA • TEL. UN 4-2626

SALES OFFICES: GREENSBORO, N. C. — A. T. GLADDEN; GASTONIA, N. C. — D. W. LYNCH TEL. 3-2662; GREENVILLE, S. C. — HAROLD H. HARRISON; LA GRANGE, GA. — JOHN FERGUSON TEL. 5040, P. O. BOX 484; SAVANNAH, GA. — HARVEY D. BLACK TEL. ADams 6-9479 2121 E. 48th ST.; DENVER, N. C. TEL. 2-6198

MEMBER OF AMERICAN GEAR MANUFACTURERS ASSOCIATION

leading mills use

KAL-CO-SYN

an advanced sizing agent
for cotton and all
cotton-synthetic warps

reduces shedding of size
and improves finish
in forty-singles and above.

Our technical staff
is at your service.

KALI MANUFACTURING CO.

CHEMISTS FOR INDUSTRY SINCE 1912
427 MOYER ST., PHILADELPHIA 25, PA.

A DEPENDABLE SOURCE OF SUPPLY

THOMASTON Fabrics

Industrial Textiles

such as:
TIRE FABRICS
HOSE AND BELT DUCKS
CHAFERS
LAUNDRY TEXTILES
SEWING TWINES
CORDAGE
YARNS
COATING FABRICS
SHEETINGS

other available facilities:
BLEACHING
DYEING
FINISHING
SEWING

We solicit your inquiries

THOMASTON MILLS
THOMASTON • GEORGIA
NEW YORK OFFICE: 40 WORTH STREET
Phone: WOrth 2-6730

NEW PRODUCT PARADE

ing packaged or bagged material from take-it-or-leave-it pallets, or directly from the truck's forks. In shipping operations when it is desirable to retain the pallets, the attachment eliminates the manual operation of transferring material from the pallets.

The Elwell-Parker Electric Co., 4344 Claire Ave., Cleveland, Ohio.

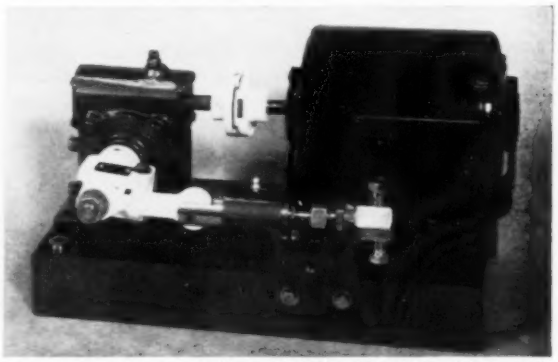
Do you want more data? Write Supplier or use card on page 209; list F-220

A sturdy, rectangular waste receptacle for factory and office is made of vulcanized fiber reinforced with rustproof steel channel at top and bottom. Two metal reinforced hand holes and a recessed bottom facilitate handling and emptying. Available in brown, gray, or green bright lacquer finishes, and with or without rubber bumpers around the top.

Federal Fibre Corp., 3710 Tenth St., Long Island City 1, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-221

Controlled volume pumps for flow rates to 7880 milliliters per hour and pressures to 1000 pounds per square inch are available. The pumps have a repetitive accuracy



of ± one per cent of full capacity. The industrial mini-Pumps are suited for accurately metering minute quantities of costly or corrosive fluids.

Milton Roy Co., 1300 E Mermaid Lane, Philadelphia 18, Pa.

Do you want more data? Write Supplier or use card on page 209; list F-222

A bi-metallic thermometer eliminates errors resulting from parallax. Except for the scale glass, the Model 2284 Mirroband unit is completely encased in welded stainless steel to provide resistance to most common acids and gases. Presently available in six ranges with increments of 1, 2, or 5 degrees, the thermometer ranges are: 25/125 F; -20/100 F; 50/500 F; -10/110 C; and 0/250 C.

Weston Electric Instrument Corp., Subsidiary of Daystrom, Inc., 614 Frelinghuysen Ave., Newark 5, N. J.

Do you want more data? Write Supplier or use card on page 209; list F-223

A redesigned automatic imprinting attachment for wrapping and bag-making machines can imprint copy legends or codes up to 4" wide by 6" long on any flexible packaging material as it feeds into the parent machine. A compact unit, called the Series 700 Rolaprinter, it occupies less than one cubic foot of space and weighs less than five pounds. It has a visible ink reservoir and is supplied with a simple mounting that enables the user to install it in minutes.

Adolph Gottscho, Inc., Hillside 5, N. J.

Do you want more data? Write Supplier or use card on page 209; list F-224

Ball bearings which feature solid inner and outer raceways and a full complement of balls, without the use of any loading slot or split race to admit the balls to the bearing, are available. Called Unibal, the bearings are

made in single row radial, double row radial, flanged or snap ring types, with or without extended inner races, with or without shields or seals, and in a wide range of widths and diameters.

Nice Ball Bearing Co., 30th and Hunting Park Ave., Philadelphia 40, Pa.

Do you want more data? Write Supplier or use card on page 209; list F-225

Rigid polyvinyl chloride industrial plastic is available in bar form for production of corrosion resisting parts such as sealers, valve components, and fasteners. Sold under the trade name of Ryertex-Omicron PVC, the plastic machines with the equipment and methods generally employed with steel, light metals, or wood.

Joseph T. Ryerson & Son, Inc., Box 8000-A, Chicago 80, Ill.

Do you want more data? Write Supplier or use card on page 209; list F-226

A diaphragm valve which gives automatic or remote flow control when coupled with its companion solenoid valves is particularly suitable for viscous liquids, and can be used with steam, air, water, and other liquids. Suitable for pressures up to 250 lb, the valve is available in 2", 2½", and 3" sizes, all screwed connections. The valve seat is separated from the push rod, and is free to float to a tight seat.

Johnson Corp., Three Rivers, Mich.

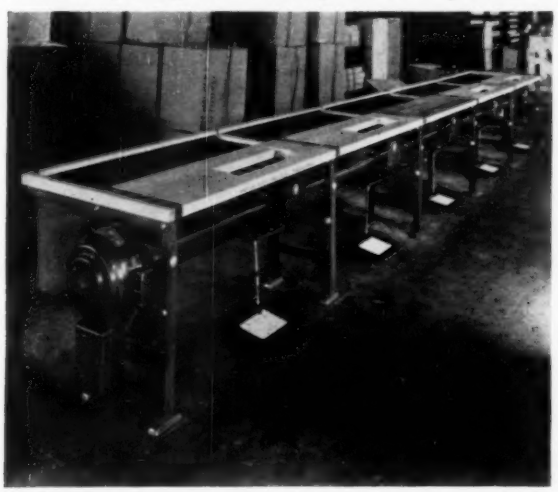
Do you want more data? Write Supplier or use card on page 209; list F-227

Hardened paint brushes can be reclaimed by use of a conditioner system called Protexem. The system, used also for storing uncleaned brushes to prevent their hardening, consists of an air-tight container in which the brushes are suspended, and a vapor solvent (released from a wick or liner inside the container) which keeps wet brushes from hardening or reclaims hardened ones.

Wisconsin Laboratories, Inc., Dousman, Wis.

Do you want more data? Write Supplier or use card on page 209; list F-228

A group drive tabling system operates at a speed of 1750 rpm, thus enabling sewing machines to operate on maximum speeds with smaller size pulleys. This transmission system can be furnished with AMCO group drive installations in either single or double lines. The new transmitter, along with shafting and other portions of



the undercarriage can be substituted for existing safety table undercarriages.

American Safety Table Co., 224 Fifth Ave., New York 1, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-229

leading mills use

KAL-CO-SYN

an advanced sizing agent for cotton and all cotton-synthetic warps

increases elongation and reduces shedding of size

in forty-singles and above.

Our technical staff is at your service.

KALI MANUFACTURING CO.

CHEMISTS FOR INDUSTRY SINCE 1912

427 MOYER ST., PHILADELPHIA 25, PA.

SERVICE *that Satisfies*

FROM OUR REPS

U. S. field men can bring a wealth of experience and information into focus on a specific traveler problem you may be "fighting." Let them assist

U. S.

RING TRAVELER CO.

159 ABORN STREET, PROVIDENCE, R. I.

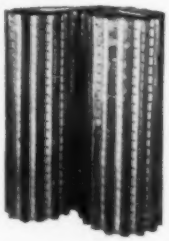
Southern Warehouse: 1443 Augusta St., Greenville, S. C.

U. S. REPRESENTATIVES ARE AT YOUR SERVICE

R. V. BORDEN, W. H. ROSE—Greenville, S. C.—Box 1048—CEdar 3-0915
O. B. LAND—Athens, Ga.—Box 1187—Liberty 6-1647
L. H. MELLOR, JR.—Mid-Atlantic States—123 Treaty Rd.—Drexel Hill, Pa. —Phone Hilltop 6-1563
H. R. FISHER—Concord, N. C.—Box 83—STate 2-1640
H. J. Smith—Providence—Box 1187—GAspee 1-0100

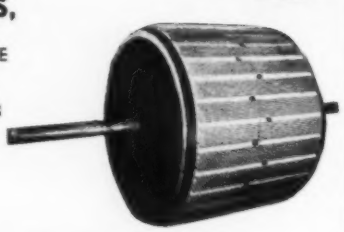
NEW PRODUCT PARADE

ALL TYPES OF PICKER APRONS, BEATER LAGS–



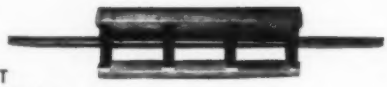
APRON SLATS, COMB BLADES,

W-3 WASTE MACHINE CYLINDERS . . .
KIRSCHNER AND H&B BEATERS . . .



NEW, REBUILT or EXCHANGED

Workmanship Guaranteed



MODERN PLANT
MODERN EQUIPMENT
EXPERIENCED PERSONNEL

WE INVITE YOUR INQUIRIES.

SMITH TEXTILE APRON CO., INC.

NEW DALLAS HIGHWAY
GASTONIA, N. C.
PHONES: UN 4-1106 or UN 5-5170

Watch lint, oil, smut

vanish

from looms and motors

Oakite "117", the new cold cleaning solvent, is perfect for textile mills. Brush it on or spray it ... blow it off or wipe it – and watch how soils literally vanish from looms, motors, twisters, reed parts and other textile equipment. Especially effective on combinations of lint, grease, oil and smut.

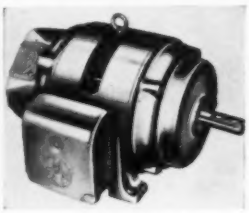
Fast dry-down, high flash point, non-conducting – no wonder so many mill people say Oakite "117" is just what they've been looking for. Write for special Service Report giving details, to Oakite Products, Inc., 26C Rector Street, New York 6, N.Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS · METHODS · SERVICE

Export Division Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

A new line of capacitor motors offers high starting torque and operating efficiency and trouble-free operation under the severe operating conditions required for service with pumps, fans, drill presses, lathes, and similar equipment. Design features include: dry electrolytic type capacitors; drip-proof frame; dynamically balanced copperspun rotor for vibrationless operation; and grease-tight bearing enclosures. These Type WCZK single-phase 60-cycle, 115/230-volt motors are available from ¾ hp to 1½ hp at 1200 rpm; 1 hp to 3 hp at 1800 rpm; and 1½ hp to 5 hp at 3600 rpm.



Fairbanks-Morse & Co., Fairbanks-Morse Bldg., Chicago 5, Ill.

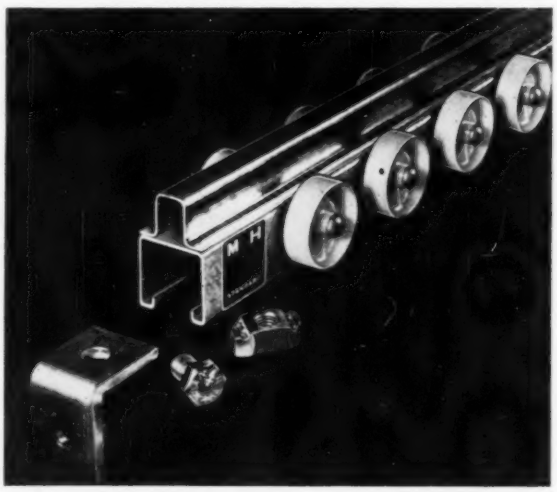
Do you want more data? Write Supplier or use card on page 209; list F-230

Expansion loops in steam lines can now be made with ball-joint pipe fittings which introduce excellent space-saving. In some instances the ball-joints eliminate the need for pipe anchors, and solve many of the problems present when piping must be done in close quarters and around equipment.

Barco Mfg. Co., 500-530 N. Hough St., Barrington, Ill.

Do you want more data? Write Supplier or use card on page 209; list F-231

A plastic wheel live storage rack molded of a high impact plastic, is interchangeable with the zinc plated ball bearing steel wheel furnished on standard Versaracks. Rails have built-in dividers to separate rows of packages



in the rack. The system permits compact storage of packaged items for easy first-in-first-out order picking, and operates on the gravity flow principle.

M-H Standard Corp., 513-521 Communipaw Ave., Jersey City, N. J.

Do you want more data? Write Supplier or use card on page 209; list F-232

A motor speed control package, comparable in efficiency to variable-speed drives with d-c motors, includes an a-c motor, allowing use of normal three-phase, 60-cycle current without rectification. Called Fincor, the package is furnished in 1/6, ¼, ⅓, and ½ hp sizes for operation on 220 volts. Speed range can be provided to fit user's specific needs. Some features are: d-c plugging for time-controlled braking; controlled acceleration; push-button for start-stop; overload protection; and anti-hunt

provision to hold speed stable at the specified setting.

Fidelity Instrument Corp., 1000 E. Boundary Ave., York, Pa.

Do you want more data? Write Supplier or use card on page 209; list F-233

A printed-circuit photorelay is adaptable for use on materials handling, packaging, processing machinery, etc., where there may be dust, vibration, humidity, high temperature, or severe voltage fluctuation. It has highly directional response to about 10 foot-candles, has no amplifier tube, no internal heat, and no time delay for warm-up.

Photobell Co., Inc., 43 Vesey St., New York 7, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-234

A compact office copier (weight 14 lb) accepts originals up to 8¼" x 11". Up to five copies of any typed, drawn, or printed original may be made on the Verifax Bantam Copier at a materials cost of about 2½ cents per copy. Capable of making intermediates or masters for use in diazo-type printers, the copier is also adaptable for use with the Verifax method of producing offset masters for office-type duplicators.

Business Photo Methods Sales Div., Eastman Kodak Co., Rochester 4, N. Y.

Do you want more data? Write Supplier or use card on page 209; list F-235

Steel conveyor chains are made in widths of 3¼", 4", 4½", 6", and 7½" in two finishes—Electrolized or black. Called Flat-Veyor, the chain conveyors are made to withstand greater loads and speeds than comparable stainless steel products, and are supplied along with companion sprockets.

Browning Mfg. Co., Maysville, Ky.

Do you want more data? Write Supplier or use card on page 209; list F-236

A lightweight saran monofilament with a satiny finish is available in several pastel shades, and in other standard colors. Called Spark-L-Lite, the yarn's softness makes it suitable for use in drapery fabrics, seat covers, and furniture tapes and fabrics.

The National Plastic Products Co., Odenton, Md.

Do you want more data? Write Supplier or use card on page 209; list F-237

A power drive for pipe cutting is built for one-man operation. Weighing only 77 lb, the drive can be transported and set up by the operator, and can be bench mounted or set up for operation on a folding optional stand. The "100" handles a standard pipe range from ⅛" to 2", and has a bolt range from ¼" to 2".

The Oster Mfg. Co., Wickliffe, Ohio.

Do you want more data? Write Supplier or use card on page 209; list F-238

A motor drive for contaminated atmospheres resists most acids, gases, and corrosive dusts. Called the Corrosion-Proof Vari-Speed Motodrive, the unit gives infinitely variable speed over a wide speed range, and is adjusted through a single hand wheel.

Reeves Pulley Co., Div. of Reliance Electric and Engineering Co., Columbus, Ohio.

Do you want more data? Write Supplier or use card on page 209; list F-239

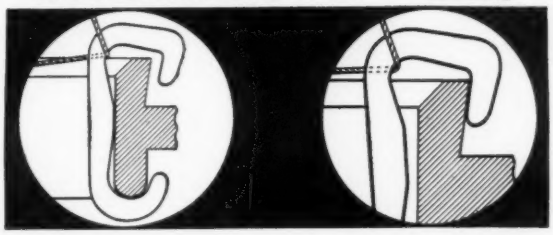
Nylon trolley wheels are available for Cable-Way overhead conveyors in installations where extreme quiet or cleanliness is required. The wheels are installed in bronze trolley side plates—neither wheels nor plates will spark against metal. The trolley has great strength, and can be used in normal temperatures.

Tipp Mfg. Co., Fourth and Franklin Streets, Tipp City, Ohio.

Do you want more data? Write Supplier or use card on page 209; list F-240

For top speed

"BACKSLOPE" TWISTER RING



KEEPS NYLON TRAVELERS ON!

As nylon traveler flexes at high speeds, DIAMOND FINISH Backslope* design prevents it from flying off.

REQUEST LITERATURE AND QUOTATION

*Coats and Clark Patent

WHITINSVILLE (MASS.) SPINNING RING CO.

Makers of Spinning and DIAMOND FINISH *Twister Rings since 1873*

Rep. for the Carolinas & Va.: W. K. SHIRLEY, P.O. Box 406, Belmont, N. C.
For Ala., Ga., & Tenn.: P. C. EVERETT, 369 Meadowbrook Dr. NE, Atlanta

KEEP MACHINES RUNNING

...reduce maintenance costs,

with **DEUBLIN ROTATING UNIONS**

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ LEAKPROOF
- ★ CORROSION PROOF
- ★ EASY TO SERVICE
- ★ VIRTUALLY FRICTIONLESS
- ★ PRECISION BUILT FOR LONGER LIFE
- ★ INTERCHANGEABLE with any other rotating union
- ★ VERSATILE—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ MINIMUM TORQUE makes it ideal for high speed applications

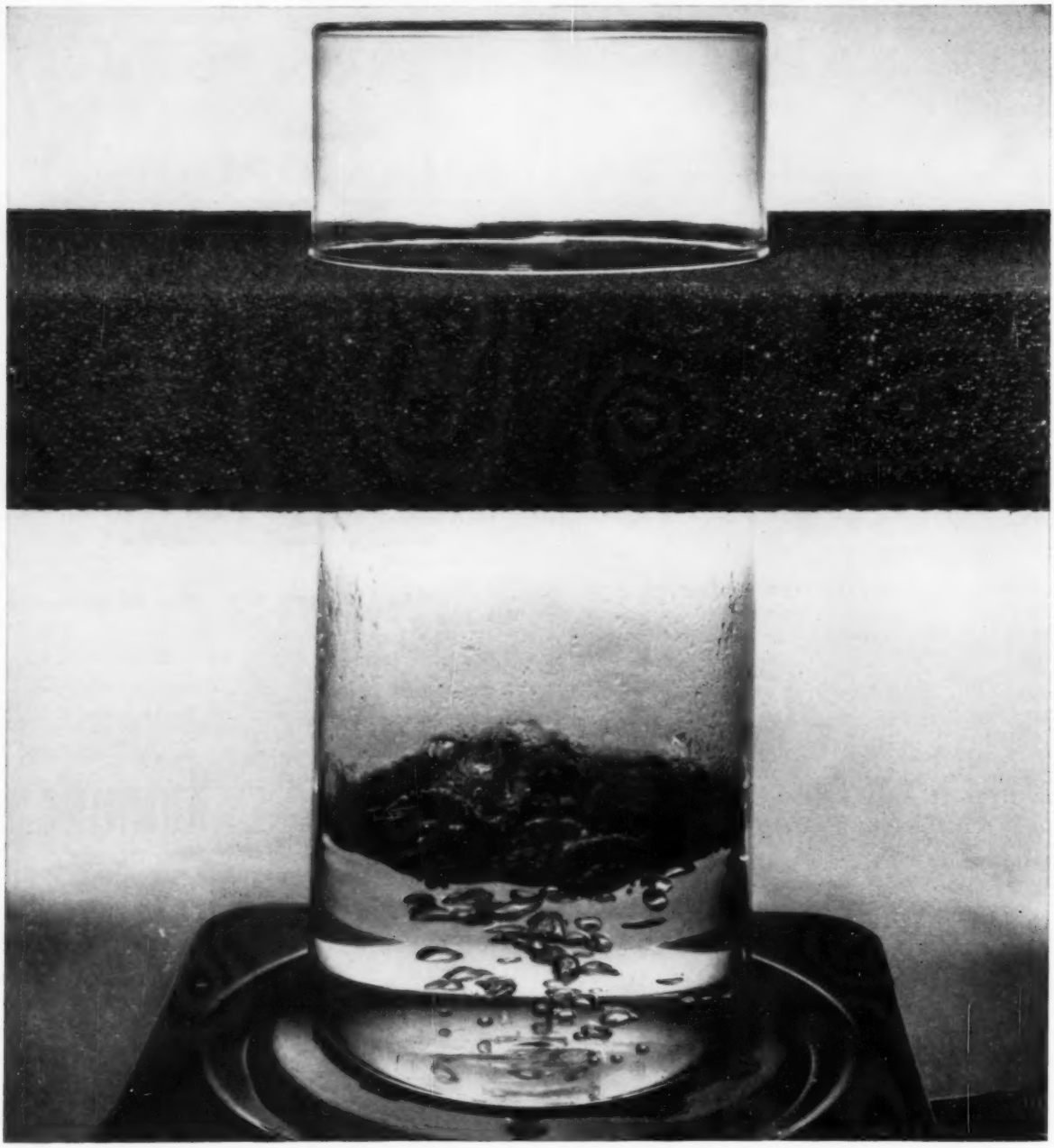
See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

Write today for full details and prices.

104

DEUBLIN COMPANY
1167 Waukegan Road
Glenview, Ill. (Chicago Suburb)

NEW PRODUCT PARADE



. . . always an insulation investment; never an insulating expense

FOAMGLAS® IS VAPOR-PROOF

Water vapor is the biggest threat to any insulation's thermal performance. It is present in nearly every situation requiring thermal insulation. Most insulations absorb vapor. When they do, the vapor can condense within the material . . . and turn the insulation into a conductor of heat. Eliminate this threat. Use Pittsburgh Corning FOAMGLAS. Its sealed glass cells can never absorb or transmit vapor (see above) . . . thus guaranteeing long lasting insulating value that never fades from its original high level. There's still more to this insulation investment story. FOAMGLAS is dimensionally stable . . . can't burn . . . unusually strong . . . acid-proof . . . vermin-proof . . . easy, economical to handle and install. Write for our latest literature. PC Glass Blocks are another outstanding building product of Pittsburgh Corning Corporation.

PITTSBURGH CORNING CORPORATION

Dept. AG-68, One Gateway Center, Pittsburgh 22, Pa. • In Canada: 57 Bloor Street West, Toronto, Ontario

You get more new ideas from DU PONT

WASH 'N' WEAR REALLY BLOSSOMS OUT

with help of Du Pont Dyeing Developments

Several years ago "DACRON"* polyester fiber promised to revolutionize the men's suiting market. However, fabrics were available only in limited colors and patterns. Du Pont then came to the assistance of mills by developing dyes and dyeing methods specifically for "DACRON" and blends made with "DACRON." Now that consumers can choose from a wide range of colors and patterns, summer suitings and wash and wear fabrics have really blossomed. And the first mills to adopt Du Pont discoveries are harvesting the profits.

Here is another example of how mills enjoy continued improvements in dyeing when they adopt Du Pont Dyeing Developments. In this case, Du Pont first gave mills "LATYL"* dyes in all the colors needed, and then the Thermosol method for attaining the required fastness properties in wash and wear.

If you'd like to know how Du Pont can help you, just write to E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Dept., Dyes and Chemicals Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

DYES AND CHEMICALS

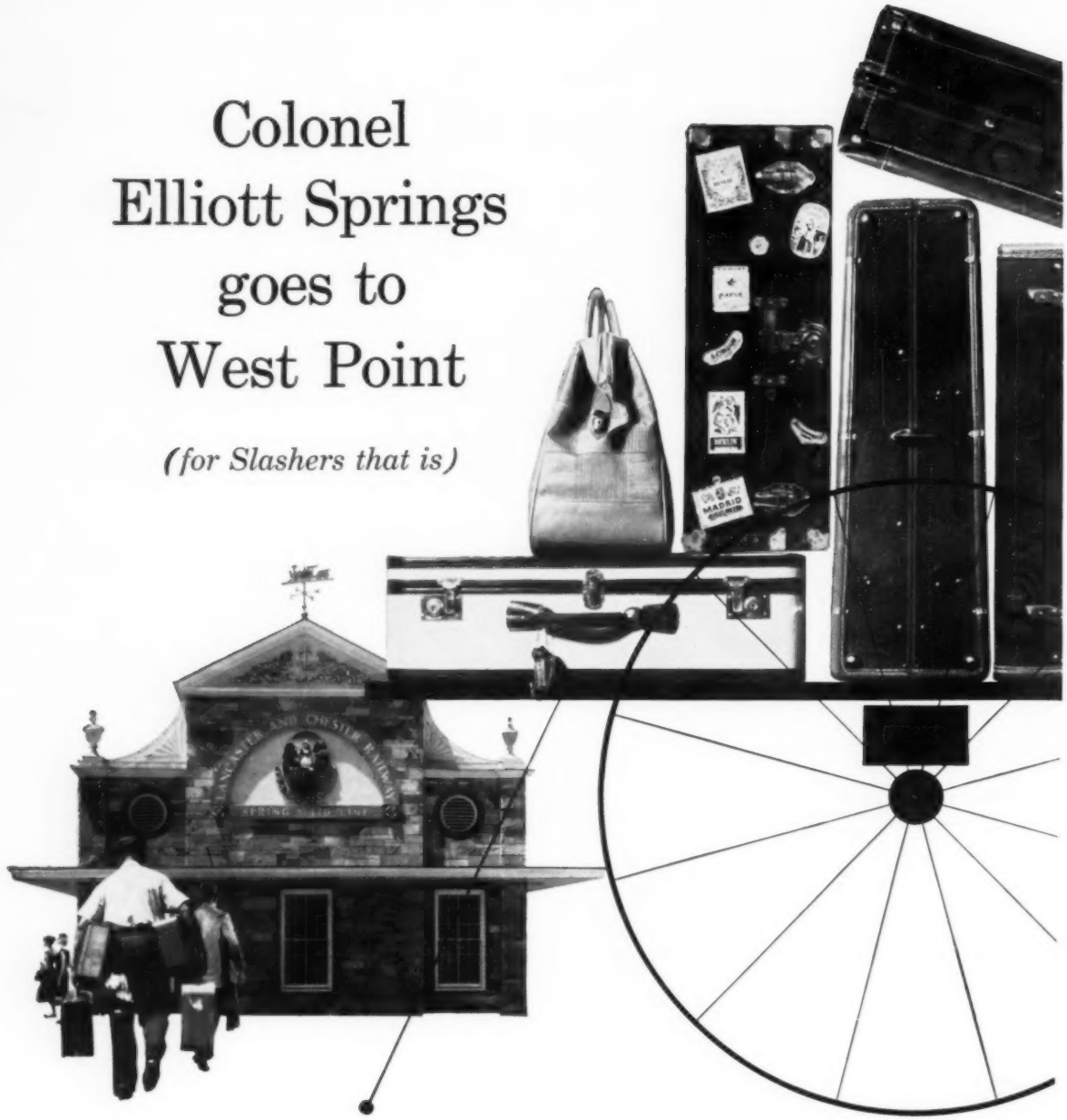
DU PONT

REG. U. S. PAT. OFF.

Better Things for Better Living
. . . through Chemistry

Colonel Elliott Springs goes to West Point

(for Slashers that is)



When Col. Elliott Springs wanted extremely versatile, high-production slashers, he went to West Point Foundry & Machine Company. He ordered 25 Multi-Cylinder Slashers to replace the 32 operating in five of his mills. As a result, production records show that the 25 West Point Foundry slashers are slashing *better* warp in volume equal to 40 of the old style slashers he replaced. Loom stops are less. High quality is consistent—a necessity for meeting Springs Cotton Mills' exacting standards. Put West Point Foundry's engineering experience and know-how to work on your slasher problems. *It's a one way ticket to bigger profits.*

You have a choice with West Point Foundry. West Point makes both MULTI-CYLINDER and AIR-DRI® slashers.

WEST POINT Foundry & Machine Company

WEST POINT, GEORGIA

TI'S INFORMATION CENTER

BOOKLETS • NEW EQUIPMENT • ADVERTISEMENTS

Help yourself to free literature and more details on any product mentioned in this issue.

Instead of writing a dozen different manufacturers for free literature and more information on equipment, supplies, or services, just insert in the appropriate space provided on one of these postage-free cards the key numbers of the items in which you are interested, and drop the card in the nearest mail just insert the name of the company and page number in the box. Use the cards also to get details on any advertisement—space provided.

TI pays the postman!

JUNE, 1958

Send free information on these NEW PRODUCTS and/or services (fill in key numbers):

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Send this FREE LITERATURE (fill in key numbers):

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Send free information on these ADVERTISEMENTS:

Company _____ Page _____ Company _____ Page _____

Company _____ Page _____ Company _____ Page _____

My Name _____ Position _____

My Company's Name _____

Address (number and street) _____

City _____ Zone _____ State _____

JUNE, 1958

Send free information on these NEW PRODUCTS and/or services (fill in key numbers):

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Send this FREE LITERATURE (fill in key numbers):

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Send free information on these ADVERTISEMENTS:

Company _____ Page _____ Company _____ Page _____

Company _____ Page _____ Company _____ Page _____

My Name _____ Position _____

My Company's Name _____

Address (number and street) _____

City _____ Zone _____ State _____

These cards can help you get valuable information

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

Textile Industries

806 PEACHTREE ST., N. E.

ATLANTA 8, GEORGIA

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

Textile Industries

806 PEACHTREE ST., N. E.

ATLANTA 8, GEORGIA

HELPFUL BOOKLETS FREE!

6-1 TABLE MODEL CARPET TUFTER. Literature on table model carpet machine which has yardage machine features. Makes throw-rugs or yardage, in cut or loop. Broad Street Machine Co., 2614 Broad St., Chattanooga 8, Tenn.

6-2 THE STORY ON LUREX. Information on metallic yarns made with Mylar and how they are developed to broaden the scope of the tufted industry. The Dobeckmun Co., 3301 Monroe Ave., Cleveland 1, Ohio.

6-3 CARPET DRYERS. Booklet describes two outstanding features: Color and tone integrity are maintained; width integrity is maintained. J. O. Ross Engineering Co., New York, N. Y.

6-4 CUSTOM-TAILORED LATEX. Information on Vulcanols, latex based formulations which provide dimensional stability, firm pile anchorage, non-skid, non-fray, and the desired hand. Alco Oil & Chemical Co., Trenton Ave. and William St., Philadelphia 34, Pa.

6-5 SUPPLIES FOR TUFTERS. Information on yarns for rug tufting or chenille or carpet backing. Piedmont Cotton Mills, East Point, Ga.

6-6 NEW DRYING SYSTEM. Describes high capacity, custom engineered drying equipment for Tufted plants. Dalton Sheet Metal Co., Inc., Dalton, Ga.

6-7 DIAL-TYPE TUFTING MACHINE. Information on the Dial-Type Tufting machine which is a step toward automation in the tufted carpet industry. Super Tufter Machine Co., Inc., Fort Oglethorpe, Ga.

6-8 CARPET CORES, STORAGE TUBES. Literature on simplified storage and better cores for rugs. Sonoco Products Co., Hartsville, S. C.

6-9 PROFITABLE CURING. Complete story on profit-making loop curers and roller curers. Proctor & Schwartz, Inc., Seventh and Tabor Rd., Philadelphia 20, Pa.

6-10 LAMINATED CARPET COVERS. Complete information on Rol-Lap Carpet Covers with cemented seams. Bemis Bros. Bag Co., St. Louis 2, Missouri.

6-11 DRYING TUMBLERS. Details on fast, efficient open-end tumblers. Huebsch Manufacturing Co., 3775 N. Holton St., Milwaukee 1, Wisconsin.

6-12 COMPLETE TUFTED SUPPLIES. How to get your tufting necessities with one telephone call. Fulton Bag and Cotton Mills, Atlanta, Ga.

6-13 COMPLETE LINE OF TUFTING MACHINERY. Details on complete line of tufting machinery for carpets, throw rugs, robes, bedspreads, upholstery, etc. Cobble Bros. Machinery Co., Inc., Riverside Dr., Chattanooga, Tenn.

6-14 CANDLEWICK TUFTING YARNS. In cotton, rayon, nylon and blends . . . a "put up" for every need. Candlewick Yarn Co., Dalton, Ga.

6-15 SELECTIVE SPEED DRIVES. Bulletin describes motor speed control from alternating current. Gives advantages and uses to industry. Century Electric Co., 18th and Pine Sts., St. Louis 3, Mo.

6-16 WEAVING SPECIALTIES. Bulletin gives sizes, specifications, prices and drawings of plastic specialties for weaving. Engineered Plastics, Inc., Gibsonville, N. C.

6-17 MOTOR COUPLING. Folder details pertinent application and selection data for new MC couplings for transmitting electric motor power to pumps, generators, speed reducers. Link Belt Co., Prudential Plaza, Chicago 1, Ill.

6-18 POLYETHYLENE FOR FINISHING. Data sheet describes application of emulsified polyethylene to wet process finishing of all types of materials. Semet-Solvay Petrochemical Div., 40 Rector St., New York 6, N. Y.

6-19 COTTON BALE HANDLING. Describes hydraulic attachment for trucks which picks up cotton and other baled materials by applying side pressure. Hyster Co., 2902 N. E. Clackamas St., Portland 8, Oregon.

6-20 CASTERS WITH BRAKES. Bulletin describes types of casters provided with brakes for applications requiring this feature. Darnell Corp. Ltd., Downey, Calif.

6-21 V-BELT FASTENERS. Booklet describes Alligator V-belt fasteners for open-end V-belting. For emergencies when correct endless belting is not available; eliminates costly dismantling. Flexible Steel Lacing Co., 4607 Lexington St., Chicago 44, Ill.

6-22 SOLVENT AND RUST PREVENTIVE. Folder describes Immunol, a non-toxic, non-flammable solvent and rust preventive. Harry Miller Corp., 4th and Bristol Sts., Philadelphia 40, Pa.

HELPFUL BOOKLETS FREE!

OPENING THROUGH ROVING

R-1 Lummus Pepper-Shaker Opener —Gives complete details and photographs Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-2 Static Elimination — How to eliminate static safely and inexpensively. Simco Co., 920 Walnut St., Lansdale, Pa.

R-3 Card Grinding Information — Care and operation of cards. B. S. Roy & Son Co., Worcester, Mass.

R-4 Card Clothing — Describes Strip-O-Matic Card Clothing. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia, Pa.

R-5 Versa-Matic Drawing Frame — Describes drafting elements, quality of sliver, roving and yarn possible. Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

R-6 Sargent Opener—Describes opener with rotary evener and stripper. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-7 Ball Bearing Comb Boxes — Describes working principle, shows cut-away Views, Southern States Equipment Corp., Hampton, Georgia.

R-8 Feathertouch Drafting — Describes "highest production per frame at lowest cost." Ideal Industries, Inc., Bessemer City, N. C.

R-9 Automatic Weighing Feeders — Tandem Weighing Feeder produces webs, mats and felts of continuing accuracy. W. D. Dodenhoff Co., Inc., Box 178, Greenville, S. C.

R-11 Flexidyne Individual Card Drive—Describes operating principles, includes prices. Dodge Mfg. Co., Mishawaka, Indiana.

R-12 Bobbins — Catalog describes metal, wood and plastic bobbins. Illustrations show actual use. Lestershire Spool Div., National Vulcanized Fiber Co., Johnson City, N. Y.

R-13 Tips On Carding Procedure — Very helpful monthly bulletin concerns card operation and care. Ashworth Brothers, Fall River, Mass.

R-14 Pneumastop For Fly Frames—Brochure shows type of installation and method of operation. Pneumafil Corp., Charlotte 8, N. C.

R-15 Advantages of Aldrich Pickers —Good technical text, comprehensive pictures. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-16 Universal Card Coiler—Gives 12 reasons why it's "the best," includes dimensions. McDonough Power Equipment, Inc., McDonough, Ga.

R-17 New Condenser Tape — Describes Supr-O-Tape an impregnated fabric condenser tape. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

R-18 Coilers and Conversions — Describes new complete coilers and conversions for cards. Southern States Equipment Corp., Hampton, Ga.

R-19 84" Woolen Card — Includes picture, floor plan, description, and technical details. Davis & Furber Machine Co., North Andover, Mass.

R-20 SRRL Opener—Cleaner—Information on new SRRL development for opening and cleaning cotton being manufactured for sale to mills by Davidson-Kennedy Co., 1090 Jefferson St., N. W., Atlanta, Ga.

SPINNING—TWISTING—WINDING—SPOOLING—WARPING—THROWING

R-101 Spinning News — Up-to-the minute news on spinning equipment. Roberts Co., Sanford, N. C.

R-103 Products For Spinning and Weaving—Complete line, applications, advantages shown. Dayton Rubber Co., Textile Div., Dayton, Ohio.

R-104 New Bobbin Manual — Only complete, authoritative bobbin guide in the industry. Write direct to Dept. DD, Lestershire Spool Division, National Vulcanized Fibre Co., Wilmington 99, Delaware.

R-105 Spindle Oil — "Gulfspin" insures against excessive wear and eliminates spindle wobble. Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

R-108 High Speed Automatic Quiller —Lists advantages and dimensions of "Autocopser." Terrell Machine Co., Inc., P. O. Box 928, Charlotte, N. C.

R-110 Stop Frame On Roving Failure—Adamstop instantly detects roving failures, stops frame. Adams, Inc., 209 East Stone Ave., Greenville, S. C.

R-111 Automatic Cop Winder—Tells how high production with less labor is possible. F. A. Lazenby Co. 3106 Elm Ave., Baltimore 11, Md.

R-112 Bahnson Packaged Modernization—Details on Collecto-Vac, Open-Aire Creels, Cross-Jet Cleaner, Air Conditioning. Bahnson Company, Winston-Salem, N. C.

R-113 Sectional Warper — Describes full width and sectional warpers for knitting, weaving. Robert Reiner, Inc., Weehawken, New Jersey.

R-114 Conical Rings and Flyers — Complete details and specifications. Herr Manufacturing Co., Inc., 318 Franklin St., Buffalo 2, New York.

R-115 Precise Winding Machine — For winding pineapple or straight cones and tubes of synthetics. Foster Machine Co., Westfield, Mass.

R-116 Automatic Cleaning Equipment—Working details and advantages of the Tri-Rail Cleaner. American Monorail Co., 13107 Athens Ave., Cleveland 7, Ohio.

R-117 Aluminum Section Beams — Lists advantages, includes prices and delivery schedules. Hayes Industries, Inc., Jackson, Mich.

R-118 Lubricants For Textiles — Samples of Ben Boy Bearing, Spindle, Twister Lubricants and Non-Melting Oils. Georgia-Carolina Oil Co., Box 101, Macon, Ga.

R-119 Custom Made Thread Guides—Includes composition, properties, specifications of all designs. American Lava Corporation Chattanooga 5, Tenn.

R-120 Spinning Frame Conversions—Big-package, new-frame results at half the cost. Meadows Mfg. Co., Station A., Atlanta, Ga.

R-121 Collecto-Vac — **New** development collects lint, fly and broken ends. The Bahnson Company, Winston-Salem, N. C.

R-122 Static Eliminator For Warpers-Slashers-Creels—Increased production, improved quality, reduced waste. The Portland Co., 22 Fore St., Portland, Maine.

R-123 Spinning and Twister Rings — Complete details, pictures, price lists. Whitinsville Spinning Ring Co., Whitinsville, Mass.

R-125 Lint-Free Creel—Complete details and pictures of the new Airfoil Design. Pneumafil Corporation, Charlotte 8, N. C.

R-126 Gear Bulletins — Cover products and gears for the complete textile mill. Precision Gear & Machine Co., 2001 N. Tryon St., Charlotte 2, N. C.

R-128 Suction Cleaning System—Details on new Collector Unit Model C-4. Pneumafil Corp., Charlotte 8, N. C.

R-129 Facts About Your Flyers and Spindles—Advantages of smooth flyer and spindle operation. Ideal Machine Shops Bessemer City, N. C.

R-132 Traveling Cleaners—Describes improved frame and room cleaners. Parks-Cramer Co., Fitchburg, Mass.

R-133 Lapless Endless Spinner—Full information available. Ton Tex Corporation, 31 Columbus Ave., Englewood, N. J.

R-135 Worsted Spinning — Describes five stages from top to yarn. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

R-139 Spindle Oiling Machine—Features and advantages noted. Wicaco Machine Corp., 4800 Stenton Ave., Wayne Junction, Philadelphia 44, Pa.

(Continued Next Page)

HELPFUL BOOKLETS FREE!

R-141 Handy Spinning Reference — Shows traveler speeds, sizes of ring flanges. Victor Ring Traveler Co., Providence, R. I. and Gastonia, N. C.

R-142 Unirail Uptwister — Higher yarn quality and better packages at faster speeds. Universal Winding Co., P. O. Box 1605, Providence, R. I.

R-144 Precision Textile Winding — Tensions and Density Control for winding rubber cones. Kidde Mfg. Co., 35 Farrand St., Bloomfield, N. J.

R-145 Roller Bearing Spindles — Pictured in cut-away views, advantages described. The Marquette Metal Products Co., 1145 Glenwood Ave., Cleveland, Ohio.

R-146 Cone Winder—Describes Model 102 winder, including applications. Foster Machine Co., Westfield, Mass.

R-147 Short Cut To Staple Fiber Spinning—Ten steps in operation of the Tow Stapler. Turbo Machine Co., Lansdale, Pa.

R-148 Weaver's Knotter — Instructions as to use, description. A. B. Carter, Inc., Gastonia, N. C.

R-149 Textile Roll Coverings — Describes complete line as well as other mill supplies. Armstrong Cork Co., Industrial Div., Lancaster, Pa.

R-150 Lint-Free Motor — Describes motor for constant speed a-c driven pickers, roving frames, spinning and twisting frames, etc. Westinghouse Electric Corp., P. O. Box 2278, Pittsburgh 30, Pa.

R-151 Tape For Driving Spindles — Describes banding for spindle drives on twisting, roving and spinning. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

R-152 Giant Aluminum Cotton Beams —Describes 38 x 54" section beams for cotton. Hayes Industries, Inc., Jackson, Mich.

R-153 Woolen Spinning Frame — Colored picture, complete details Davis & Furber Machine Co., North Andover, Mass.

R-154 Large Package Twister—Information on new anti-friction Jumbo Twister which carries a 14" bobbin with a 12" build. Meadows Mfg. Co., P. O. Box 4354, Atlanta, Ga.

R-155 Wide Setover Pin Drafter — Booklet describes advantages, technical aspects, adaptments of wide setover Pin Drafter. Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3, Ohio.

SLASHING—WEAVING—CLOTH ROOM—TUFTING

R-201 Looms — Describes "World's Largest Line of Looms." Crompton & Knowles Loom Works, Worcester 1 Mass.

R-202 Counting And Measuring Devices—Wide range of counting devices for all types of textile machinery Veeder-Root, Inc., Hartford, Conn.

R-203 Loom Supplies — Describes complete line. E. H. Jacobs Northern Division, The Bullard Clark Co., Danielson, Conn.

R-204 Innovation In Textile Drying—Details on Steam or Gas "Hot Air" Slasher. J. O. Ross Engineering Corp., 444 Madison Ave., New York 22, New York.

R-206 Loom Production Charts — Celluloid card shows yards per loom per week. Ralph E. Loper Co., Greenville, S. C.

R-207 Aluminum Beams—Describes lightweight beams for textiles, Hayes Industries, Inc., Jackson, Mich.

R-208 The Story Of Starches — History and information on manufacture and use of starches. National Starch Products, Inc., 750 Third Ave., New York 17, N. Y.

R-209 Loading System — Pneumatic loading system for Saco-Lowell slasher. The Foxboro Company, Foxboro, Mass.

R-211 Steel Warp Beams—Beams for both broadloom and narrow fabrics. Milton Machine Works, Inc., Milton, Pa.

R-212 Penford Gums In Textiles — Describes excellent properties for warp sizing spun yarns. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

R-213 Saco-Lowell Positrol Slasher—Includes advantages, photographs, cutaway drawings. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

R-214 Rotary Unions—Cut costs, get better sealing on can dryers. Perfecting Service Company, 332 Atando Ave., Charlotte, N. C.

R-216 Air Slasher Dryer — Shows construction and operating details. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

R-217 Butt-Tacking Sewing Machine —Describes operation, installation of single thread butt-tacking sewing machine. The Merrow Machine Co., 28 Laurel St., Hartford, Conn.

R-218 Loom Reed Booklet — Describes in detail a variety of reeds. Steel Heddle Mfg. Co., 2100 West Allegheny Ave., Philadelphia 32, Pa.

R-219 Cocker Equipment—Information on warp sizer, beam warper, creels. tensions, back-winders, etc. Cocker Machine & Foundry Co., Gastonia, N. C.

R-220 Chemical Data Sheets—Available on a full range of chemicals. Nopco Chemical Co., Harrison, N. J.

R-223 Tufting Machines — Describes automatic pattern attachment. Cobble Bros. Machinery Co., Inc., River Road, Chattanooga, Tenn.

R-226 Prevent Fabric Distortion — How to eliminate distortion and where to check for it. Mount Hope Machinery Co., 15 Fifth St., Taunton, Mass.

R-227 Formulas For Slashing Arnel —Includes also information on warping, weaving and quilling. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte 1, N. C.

R-228 The Random Web Process — Describes the Rando-Webber and Rando-Feeder. Bulletin 105. Curlator Corp., Textile Div., 501 W. Commercial St., Rochester, N. Y.

R-232 Hydraulic Slasher Drives — Bulletin 5571 describes economical approach to improved slasher operation. Vickers, Inc., 1036 Peachtree St., Atlanta, Ga.

R-233 Textile Accessories — Gives specifications of Gates textile accessories in handy pocket booklet. The Gates Rubber Co., 1001 Broadway, Denver 17, Colorado.

R-234 Cocker Slashers — Complete specifications and advantages, including allied equipment. Cocker Machine & Foundry Co., Gastonia, N. C.

R-235 Mounts For Looms — Vinyl mount eliminates need for bolts or paste. Clark, Cutler, McDermott Co., 106 W. Central St., Franklin, Mass.

R-236 Unifil Loom Winder — Describes new concept of filling preparation which needs no quilling area. Universal Winding Co., P. O. Box 1605, Providence, R. I.

R-237 High Speed Warp Sizer—Gives outstanding features and specifications. Cocker Machine & Foundry Co., Gastonia, N. C.

R-238 Traveling Loom Cleaner—Advantages of the new Oscillaire loom cleaner. Parks-Cramer Co., Fitchburg, Mass.

R-239 Draper Repair Parts Catalog —Contains illustrations covering all mechanisms and construction with complete listings. Draper Corporation, Hopedale, Mass.

R-240 Baling Presses — Describes complete line of motor-driven and hydraulic baling presses. Logemann Brothers Co., 3150 West Burleigh St., Milwaukee, Wis.

R-241 Textile Machinery Parts Catalog — Describes complete line of Dayco and Thorobred textile parts. Dayton Rubber Co., Dayton, Ohio.

(Continued Next Page)

HELPFUL BOOKLETS FREE!

R-242 Instruments For Accuracy. — Systems for sizing and slashing. Bulletin 98229, Taylor Instrument Co., Rochester, N. Y.

R-243 Counting Devices — Describes complete line of counters for every application. Trumeter Company, 1265 Broadway, New York 1, New York.

R-244 Squirrel-Cage Loom Motor — Describes totally enclosed, non-ventilated, constant-speed motors. Westinghouse Electric Co., P. O. Box 2278, Pittsburgh 30, Pa.

R-245 Static Bars — Humorously illustrates how static can be overcome. The Simco Co., 920 Walnut St., Lansdale, Pa.

R-246 Care Of Draper Shuttles — Describes how longer, troublefree service may be obtained. Draper Corporation, Hopedale, Mass.

R-247 Clutch Brake Motor For Draper Looms — Describes compact power package for driving Draper looms. Westinghouse Electric Corp., P. O. Box 2278, Pittsburgh 30, Pa.

R-250 Bulk Handling of Starch—Bulletin surveys advantages and disadvantages of a bulk system for starch. It describes the types of equipment available for each component and gives estimates of costs. A. E. Staley Mfg. Co., Box 151, Decatur, Ill.

R-251 Small Pilot Slasher — Information on new all-electric Callaway Slasher. Ideal for mills which must prepare a lot of samples. West Point Foundry & Machine Co., West Point, Georgia.

R-252 Weaving Machines — Textile job report No. 20 on Warner & Swasey Sulzer weaving machines at Yale Woolen Mills. Warner & Swasey, 5701 Carnegie Ave., Cleveland 3, Ohio.

R-253 One-Piece Sizing Agent — Houghto-Size CW provides low kettle cost, results in free-running warp of high breaking strength, increasing weaving efficiency. E. F. Houghton & Co., 303 West Lehigh Ave., Philadelphia 33, Pa.

R-254 Lubricant for Synthetics — Booklet illustrates Fibregard, a colloidal lubricant that adheres uniformly and continuously to the surfaces of man-made fibers. Harry Miller Corp., 4th and Bristol Sts., Philadelphia 40, Pa.

KNITTING

R-301 Singlehead Full-Fashioned Machine — Literature on request from the Wildman Jacquard Mfg. Co., Full Fashioned Div., Norristown, Pa.

R-302 Forged Head Aluminum Beams — Gives specifications on new high yardage beams. Milton Machine Works, Inc., Milton, Pa.

R-303 Raschel Knitter — Describes new Raschel-type knitting machine. Kidde Manufacturing Co., Inc., 35 Farrand St., Bloomfield, N. J.

R-304 Vibralon For Hosiery—Greater snag resistance, dullness, warmth and absorbency. W. F. Fancourt Co., 519 S. Delaware Ave., Philadelphia 47, Pa.

R-306 Booklets On Fidelity Machines — Details on "400", Multi-Design Ribber, Skein Reelers. Fidelity Machine Co., 3908-18 Frankford Ave., Philadelphia 24, Pa.

R-307 Needle Oil Does Not Stain — Details on "Gulftex 39" developed for knitting mills. Gulf Oil Corp., P. O. Box 1106, Pittsburgh 30, Pa.

DYEING—BLEACHING—FINISHING—PRINTING

R-401 Solvent Detergents — Capabilities and advantages noted. Oakite Products, Inc., 126C Rector St., New York, N. Y.

R-402 Tubes For Package Dyeing — Describes Dytex tubes for one-time use. Sonoco Products Co., Hartsville, S. C.

R-403 Finishing Machinery — Text and photographs of complete line of machinery. Marshall and Williams Corp., 46 Baker St., Providence, R. I.

R-404 Water Analysis — Includes tables, conversion factors, indicators, standard solutions. Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-405 Dyeing Equipment — Diagrams and descriptions of complete line. James Hunter Machine Co., North Adams, Mass.

R-406 Urea, Formaldehyde.—Literature on urea, formaldehyde or U.F. concentrate-85. Dept. CUFI-29-1, Nitrogen Div., Allied Chemical and Dye Corp., 40 Rector St., New York 6, New York.

R-407 Acid Mordant Blue B—Details on Acid Alizarine Blue B for bright navy shades. Zinsser & Co., Inc., Hastings on Hudson 6, New York.

R-408 Hydrogen Peroxide — Covers properties, uses and handling. Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-412 Cationic Surface Active Agent — Describes Uversoft "D." Harshaw Chemical Co., 1945 East 97th St., Cleveland 6, Ohio.

R-413 Chemicals, Dyes And Intermediates — Complete file of bulletins available. Metro-Atlantic, Inc., Centredale, R. I.

R-414 Wetting Agent — Describes highly concentrated detergent and wetting agent. Rohm & Haas Co., Washington Square, Philadelphia, Pa.

R-415 Peroxide Bleaching System — Illustrates and describes this continuous system. E. I. du Pont de Nemours & Co., Electrochemical Dept. T.I-2, Wilmington, Del.

R-416 Surface Tension Depressant — Tells how product can be used for wetting, dye leveling or as a penetrant. Hart Products Corp., 1440 Broadway, New York, N. Y.

R-417 Textile Chemicals — Describes leading products for wet processers. Royce Chemical Co., Carlton Hill, N. J.

R-418 Industrial Water Treatment — Discusses fundamentals of industrial water treatment. Rohm & Haas Co., Resinous Products Div., Washington Square, Philadelphia 5, Pa.

R-419 Theoretical and Applied Silk Soaking — Outlines methods and gives suggestions. Hart Products Corp., 1440 Broadway, New York 18, New York.

R-420 Brine For Textile Industry — Describes Lixate Process for making brine. International Salt Co., Inc., Scranton, Pa.

R-421 Depuma — Describes odorless, viscous, non-evaporating emulsion for anti-foam. Koppers Co., Inc., Chemicals & Dyestuffs Div., 2010 Clarke Bldg., Pittsburgh 19, Pa.

R-422 Catalyst AC-6 — Tells how curing efficiency may be stepped up as much as 25%. Monsanto Chemical Co., Plastic Division, Dept. T1-3, Springfield 2, Ohio.

R-423 Soda Ash Bulletin — Contains useful data covering this subject. Solvay Sales Division Allied Chemical & Dye Corp., 40 Rector St., New York 6, New York.

R-424 Water Repellent Finish — Describes Aquarol water repellent finish. Arkansas Co., Inc., Newark, N. J.

R-426 Industrial Oil — Catalogs on Industrial Oil and Fatty Acid products. Swift & Company, Industrial Oil Dept., 1800 165th St., Hammond, Indiana.

R-428 Chemical Catalog — Lists products with chemical composition, properties and applications. Antara Chemicals Div., General Aniline & Film Corp., 435 Hudson St., New York 14, New York.

R-429 Chemical Bulletins — Issued each month as a help to wet processers. WICA Chemicals, Inc., P. O. Box 506, Charlotte, N. C.

R-430 Hydraulic Power Units — Describes unit for operating hydraulic textile machines. B. F. Perkins & Son, Inc., Holyoke, Mass.

R-431 Proctor Drying Machinery — Describes all types of dryers, includes information on preboarding. Proctor & Schwartz., Inc., 7th and Tabor Rd., Philadelphia, Pa.

(Continued Next Page)

PROVE QUALITY BY THE SPECTOGRAPH TEST

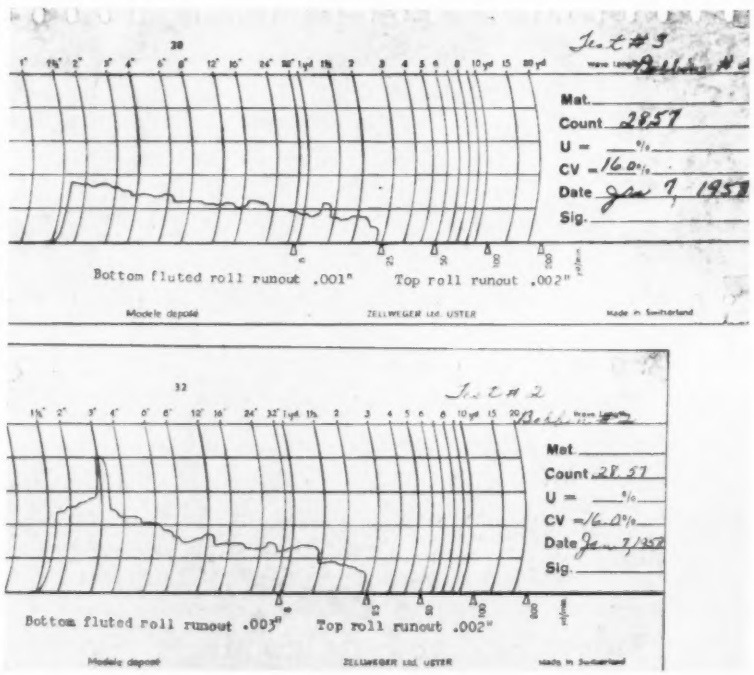
HIGH DRAFTS REQUIRE PERFECTLY FLUTED ROLLS WITH A MINIMUM OF RUNOUT.

F. A. YOUNG'S PERFECTLY FLUTED STEEL ROLLS WITH .002 RUNOUT GUARANTEED.

QUALITY YARN DEPENDS ON QUALITY ROLLS — KNOW YOUR ROLLS
TRY THE SPECTOGRAPH TEST

Following are the results of two spectograph tests.

Draft of 46—same roving—same cradle—same top rolls (nyaf® Anti-friction)



Test #3, taken with new F. A. Young steel rolls using same drafting and roving as in Test #2. Bottom Fluted Roll Runout one thousandth of an inch (.001)

(Tests show that 80% of OUR New Rolls have runout of .001 or less.)

NOTE:
Same Top Rolls used in both tests having runout of two thousandths of an inch (.002)

Test #2, taken with Bottom Fluted Roll having runout of three thousandths of an inch (.003)

IMPROVED MANUFACTURING PROCESSES ENABLE F. A. YOUNG MACHINE COMPANY TO GUARANTEE NOT OVER .002 RUNOUT ON INDUCTION HARDENED, FLUTED STEEL ROLLS.

QUALITY ROLLS PRODUCE PATTERNLESS YARN

F. A. YOUNG MACHINE CO.

Telephone UNiversity 5-8556

GASTONIA, NORTH CAROLINA

FLUTED ROLLS FOR SPINNING • FLYER FRAMES • COMBERS • DRAWING & LAP MACHINES • NYAF

HELPFUL BOOKLETS FREE!

R-433 Safe Handling Of Hydrogen Peroxide — Lists safety rules to be followed in handling the product. Solvay Process Division, Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-434 Base Detergent Acids—Bulletin tells how new TENN-ACIDS offer simple and practical method for mills to prepare concentrated, low cloud point detergents based on alkyl aryl sulfonates. Tennessee Corp., Marketing Research & Development Dept., 1330 W. Peachtree St., Atlanta 9, Ga.

R-435 Cut Water Treatment Costs — Describes the control of scale, slime, algae and corrosion. Oakite Products, Inc., 126C Rector St., New York 6, New York.

R-436 Rapidase For De-Sizing — The properties and characteristics of Rapidase in detail. Wallerstein Co., Inc., 180 Madison Avenue, New York 16, N. Y.

R-437 Caustic Soda—Book describes the uses, manufacturing processes, unloading and dissolving diagrams, materials of construction, analytical processes, etc. Wyandotte Chemicals Corporation, Michigan Alkali Division, Wyandotte, Michigan.

R-438 Surface-Active Agent — Properties, applications, of Nonionic Actylphenoxyethanol Triton. Rohm & Haas Co., Special Products Dept., Washington Square, Philadelphia, Pa.

R-439 Curing Oven — Details, pictures, and advantages of gas-fired oven. James Hunter Machine Co., North Adams, Mass.

R-440 Guiders And Tension Devices — Straight line guiding of open width goods. Mount Hope Machinery Co., 15 Fifth St., Taunton, Mass.

R-441 Processing Arnel Fabrics and Blends — Formulas for dyeing, printing, finishing and heat treating. Celanese Corp. of America, Textile Div., Marketing Dept., Box 1414, Charlotte, N. C.

R-442 Hycar Latices — Physical properties and typical fields of application. B. F. Goodrich Chemical Co.,

R-443 Sodium Hydrosulfite — Literature and test samples are available on "T-C Hydro." Tennessee Corp., 617-629 Grant Bldg., Atlanta, Ga.

R-445 New Finishing Rolls — Money-saving facts about long-wearing, quality rolls. The Dayton Rubber Co., Holfast Div., 1486 Lakewood Ave., Atlanta, Ga.

R-446 Ethanolamines — Lists application, chemical and physical properties. Nitrogen Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, New York.

R-447 Nappers For Treating Any Fabrics — Complete details on Muller Tri-Napping Machine. Franz Muller, Monchen-Gladbach, Germany.

R-448 Ball Bearing Turn Table — Describes 48-inch steel turn table for mills. Birch Brothers, Inc., 32 Kent St., Somerville, Mass.

R-449 Rotary Dyeing Machine—For use in dyeing hosiery, hats, gloves, socks, etc. Turbo Machine Co., Lansdale, Pa.

R-452 Micro Switch For Wet Process — Advantages and applications in dyeing, bleaching, finishing. Micro Switch Div., Minneapolis-Honeywell Regulator Co., Freeport, Ill.

R-453 Complete Line Of Mathieson Chemicals — Covers organic, inorganic, specialty chemicals. Olin Mathieson Chemical Co., Industrial Chemicals Div., Baltimore 3, Md.

R-455 Aligning Lays—Setting instructions for step-by-step aligning. Draper Corporation, Hopedale, Mass.

R-456 Dyeing and Finishing Machinery — Complete line presented in series of catalogs. Birch Brothers, Inc., 32 Kent St., Somerville 43, Mass.

R-457 Dyeing, Bleaching and Drying Equipment — Complete line for cotton, wool and synthetics described. Color pictures. Morton Machine Works, 1718 3rd Ave., Columbus, Ga.

R-458 Napthol Ratios Slide Chart — Quickly and accurately enables operators to determine Napthol Ratios. Alliance Color & Chemical Co., 33 Ave. P, Newark 5, New Jersey.

R-459 "PCB" Rock Salt — Tells how product saves money, eliminates bad dyeing. Morton Salt Co., Industrial Division, 120 So. LaSalle St., Chicago 3, Ill.

R-461 Wool Oils—Describes influence of wool oils in producing suality yarns and fabrics. Proctor & Gamble Dist. Co., Gwynne Bldg., Cincinnati, Ohio

R-462 Bleaching With Peroxygen Chemicals — Bleaching methods comprehensively treated. Becco Chemical Div., Food Machinery & Chemical Corp., Station B, Buffalo 7, New York.

R-464 Automatic Control System For Continuous Bleaching — How to control temperature, pressure and liquid level. Taylor Instrument Companies, Rochester 1, New York.

R-466 Penford Finishing Gums — Complete data, including physical properties. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

R-467 Regeneration Of Zeolite Water Softeners — Explains advantages of Lixate Process. International Salt Co., Scranton, Pennsylvania.

R-468 Dyeing Synthetic Fibers—Detailed analysis of methods and materials. General Dyestuff Co., 435 Hudson St., New York 14, New York.

R-469 Single Apron Stock Dryers — Presents latest idea in automatic drying. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-470 Eliminate Dye-Bath Shock — How to protect fabrics from crow's-feet, uneven shades. Foxboro Company, 487 Neponset Ave., Foxboro, Mass.

R-474 Industrial Brushes — Features use on shears, printing machines. M. W. Jenkins' Sons, Inc., 444 Pompton Ave., Cedar Grove, N. J.

R-475 Waste Heat Recovery — Describes system of waste heat recovery from polluted water. Ludell Mfg. Company, 5200 West State Street, Milwaukee, Wis.

R-476 Washers For Scouring, Bleaching, Acidifying — Describes high-capacity, continuous process washers. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-478 Wool Cleaning Unit—Describes unit for cleaning carpet wools mechanically before scouring. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

R-479 Naphthol for Lightfast Browns—Booklet describes new, straight, nonsubstantive naphthol, Naphthol AS-BN, for the continuous naphtholation of cotton and rayon piece goods in the dyeing of economical, fast-to-light browns. General Dyestuff Co., 435 Hudson St., New York 14, New York.

R-480 Softener, Lubricant, Napping Aid—Technical information available on softener, lubricant and napping aid for natural and synthetic fibers, yarns and fabrics. Nopco Chemical Co., Harrison, N. J.

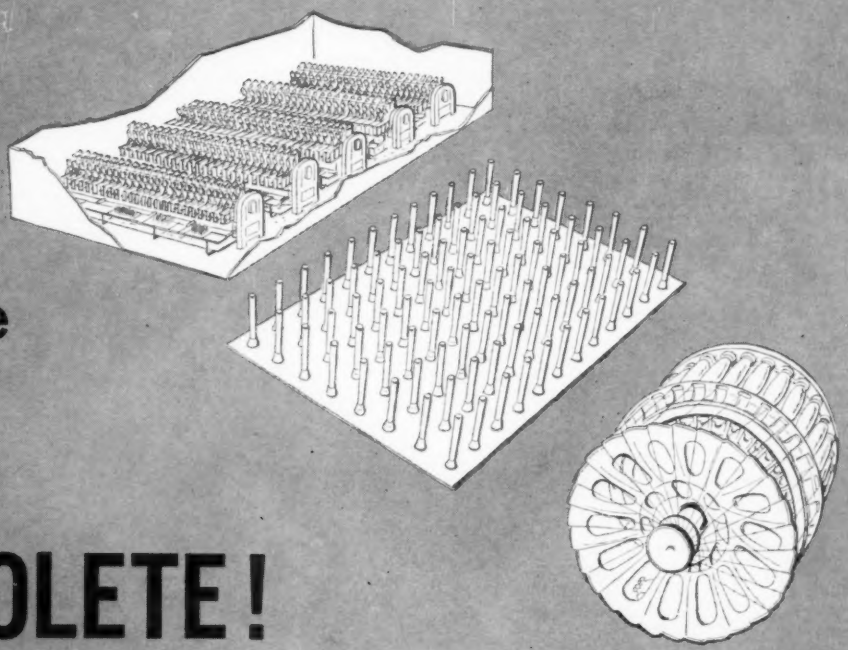
R-481 Handbook on Methocel—Gives technical information and use data on family of methylcellulose ethers called Methocel. Organic Chemicals Sales, The Dow Chemical Co., Midland, Mich.

FIBERS AND YARNS

R-502 Fortisan-36, New Textile Fiber—Includes charts, diagrams, text, presents technical properties. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte, N. C.

R-503 Caprolan Nylon Heavy Yarns—Describes strength, long flex life and ready dyeability. Fiber Sales Dept., National Aniline Div., 261 Madison Ave., New York 16, N. Y.

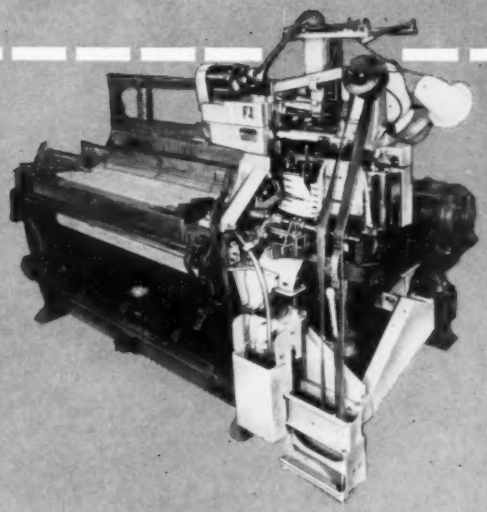
(Continued Next Page)



All these are **OBSOLETE!**

UNIFIL® did it

...and these mills are proving it!



AMEROTRON • BURLINGTON INDUSTRIES • CANNON MILLS • CONE MILLS • DOVER MILL GROUP • PONEMAH MILLS • RIEGEL TEXTILE • STARR MILLS • J. P. STEVENS • UNITED MERCHANTS AND MANUFACTURERS • WOODSIDE MILLS *(A partial list only)*

Repeat orders from many mills are evidence of UNIFIL's *proven performance.*

Ask for a Profit Factor Analysis — Your competitors did — see how you can cut costs also. Call your Universal Sales Engineer.

23.7.28

UNIVERSAL WINDING COMPANY

HELPFUL BOOKLETS FREE!

R-506 Rayon—Mile By Mile—Details on how rayon is produced mile by mile, perfect inch by inch. Industrial Rayon Corp., 500 Fifth Avenue, New York 18, N. Y.

R-507 The Chemstrand Nylon Story—Describes the birth and growth of Chemstrand nylon. Chemstrand Corp., 350 Fifth Ave., New York 1, N. Y.

R-508 Color-Fast Fibers — Further information on "Coloray," Courtauld's solution dyed rayon staple which is a contribution to colorfastness in fabrics. Courtaulds (Alabama) Inc., 600 Fifth Ave., New York 20, N. Y.

RESEARCH—TESTING—LABORATORY

R-601 Testing Instruments—Descriptions of 37 instruments for testing textiles. Custom Scientific Instruments, Inc., 541 Devon St., Kearney, N. J.

R-602 Metal Detector — Spot troublemakers before they harm equipment or fabrics. Radio Corp. of America., Dept. S-271, Building 15-1, Camden, N. J.

R-603 Shadograph Weighing Devices—Pictures and information on various types of scales. Exact Weight Scales Co., Columbus 8, Ohio.

R-604 Evenness Tester—Details on taking the guess out of quality control. Uster Corp., 2516 Wilkinson Blvd., Charlotte, N. C.

R-606 Strobotac — Measures speed of rotating, reciprocating or other cyclic motions. General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

R-607 Yarn Count Scale—Data sheet tells how direct-reading instrument provides fast, accurate method of determining yarn count number. Exact Weight Scale Co., Columbus, Ohio.

MANAGEMENT, PROCESS ENGINEERING CONSULTANTS, FACTORS

R-701 Factoring Service—Details on advantages of factoring, including information on general banking and pension plans. Trust Company of Georgia, Atlanta, Ga.

R-702 Beechcrafts At Work — Tells how Beechcraft executive airplanes can save time and money. Southern Airways Co., Atlanta Airport, Atlanta, Ga.

R-705 The Wonalancet Way — Deals with current problems in Textiles. Wonalancet Company, 128 Burke St., Nashua, N. H.

R-706 A Fair Day's Pay And In Return A Fair Day's Work — Outlines proper utilization of labor, material and equipment. American Associated Consultants, Inc., 250 Park Ave., New York, N. Y.

R-707 Non-Woven Fabrics— Booklet gives outline of nature and history of non-wovens and the manufacturing techniques of today. Booklet 56-219A, Chemical Div., Goodyear Tire & Rubber Co., Akron 16, Ohio.

GENERAL PLANT OPERATION

R-801 Textile Brushes — Describes complete line of brushes for all departments of mill. S. A. Felton & Son Co., Manchester, N. H.

R-802 Belt Lacing Equipment — Includes prices, specifications, etc. Clipper Belt Lacer Co., Grand Rapids, Michigan.

R-804 "Motor Selector." — How to select a-c motors for specific application. Bulletin B-2103. Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio.

R-805 Everything For Floor Care — Describes scrubbing, waxing, polishing and mopping equipment as well as waxes, sealers, and cleansers. Finnell System, Inc., Dept. TI, 1300 East St., Elkhart, Ind.

R-806 Rotary Pressure Joints—Details on self-lubricating, self-adjusting, self-aligning joints. The Johnson Corp., Three Rivers, Mich.

R-807 Servicing "One-Shot" Lubricators—Describes high capacity spring discharge piston pump lubricator. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-809 Wrap Up Lint Problems—Automatic lint filters remove lint from air, winds it into desposable roll. Bulletin 234, American Air Filter Co., 275 Central Ave., Louisville 8, Ky.

R-810 Stop Corrosion — Details on "Speed-Rex" paint for metal, wood and concrete. Truscon Laboratories, Box 69, Milwaukee Junction, P. O. Dept. T, Detroit 11, Mich.

R-812 Mechanical Power Transmission — Includes drawings, dimension, weights, prices, application. Dodge Mfg. Corp., Mishawaka, Indiana.

R-813 Metal Cleaner and Preserver—Describes Immunol, a neutral, nontoxic, non-flammable, odorless solvent that cleans, degreases and rustproofs metal. Harry Miller Corp., 4th and Bristol Sts., Philadelphia 40, Pa.

R-816 Leather Belting — Selection, installation, proper maintenance. Atlanta Belting Co., 508-510 Whitehall St., S. W., Atlanta, Ga.

R-817 One-Shot Lubricators—Details on pull-type semi-automatic lubricators. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-818 Story of Nylon Bristle. — Tells of discovery and production, with special attention to "Tynex," a form of Nylon ideal for use in brushes. M. W. Jenkins' Sons, Inc., 444 Pompton Ave., Cedar Grove, N. J.

R-820 Floaxial Dial Scales — Explains mechanism and gives applications. Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.

R-821 Modern Methods Of Textile Floor Maintenance — Complete details on taking care of mill floors. G. H. Tennant Co., 2530 N. Second St., Minneapolis 11, Minn.

R-822 Industrial Greases — Describes multi-purpose lithium soap industrial greases. Sinclair Refining Co., 600 Fifth Ave., New York, New York.

R-823 Roller Bearings For Textiles—How roller bearings are employed for more profitable textile production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

R-824 Cylinders And Boosters — Complete listing of "in stock" equipment including proce and description. Miller Fluid Power Co., 2040 N. Hawthorne, Melrose Park, Ill.

R-828 Blower And Exhausters — Full description, including detailed drawings. Buffalo Forge Co., 490 Broadway, Buffalo 5, N. Y.

R-829 Paint Stripping Booklet — Explains simplified method of stripping paint. Oakite Products, Inc., 22 Thames St., New York 6, New York.

R-830 Air Filtration — Illustrates Auto-Airmat, a dry-type air filter. American Air Filter Co., Inc., 275 Central Ave., Louisville 8, Ky.

R-832 Drinking Fountains & Coolers—Description of all models, dimensions, illustrations. Halsey W. Taylor Co., Warren, Ohio.

R-833 Textile Leathers Catalog — Characteristics and advantages of "Tannate" leathers. J. E. Rhoads & Sons, 2100 W. Eleventh St., Wilmington, Del.

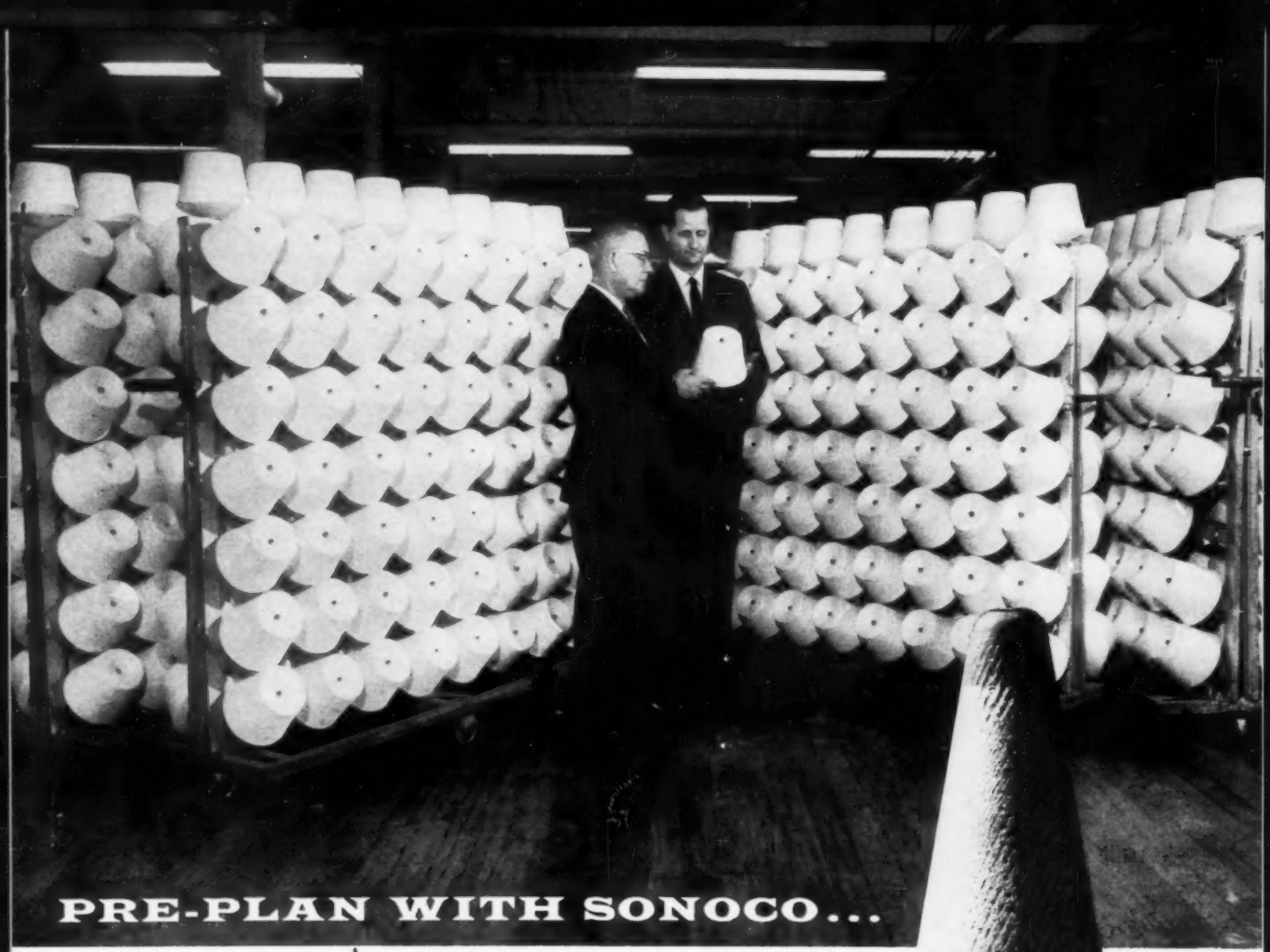
R-834 Catalog Of Needle Bearings — Design, application for five types of needle bearings. The Torrington Co., Torrington, Conn.

R-835 Textile Lubrication — Shows methods and means of lubricating all machinery. The Texas Co., 135 East 42nd St., New York 17, N. Y.

R-836 Metered Lubrication — Points up advantages of central lubrication systems. Bijur Lubricating Corp., Rochelle Park, N. J.

R-837 Service Procedure For Ball Bearings—Helpful manual shows how to increase life of ball bearings. New Departure Div., General Motors Corp., Bristol, Conn.

R-839 Lubrication Of Electric Motors—How to lubricate and clean ball and roller bearings. New York & New Jersey Lubricant Co., 292 Madison Ave., New York 17, New York.



PRE-PLAN WITH SONOCO...

FOR A PERFECT PACKAGE!!

When you pre-plan with SONOCO, you get a yarn carrier best suited to your particular operation.

Typical of SONOCO specialization is the widely-accepted *Nutaper* cone with Velvet surface for winding cotton yarns. This cone provides a perfect foundation for a firm, uniform package that will deliver smoothly and evenly to the *last turn* under high speed conditions. Even with fine count yarns, the Velvet surface prevents slippage, thereby allowing a more perfect package to be built.

From SONOCO'S variety of cone surfaces you can find one to fulfill your requirements. Smooth, rough, Velvet or Unitex surfaces are available — each one developed thru extensive research and each proven in actual mill production.

Pre-plan with SONOCO for better performance. For a perfect carrier . . . call SONOCO!

SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY

Main Office—HARTSVILLE, S. C. • MYSTIC, CONN. • AKRON, IND. • LOWELL, MASS. • PHILLIPSBURG, N. J. • LONGVIEW, TEXAS • PHILADELPHIA, PA. • LA PUENTE, CAL. • ATLANTA, GA. • GRANBY, QUEBEC • BRANTFORD, ONTARIO • MEXICO, D. F.

1462

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 34)

pointed assistant professor of textile design and named head of the textile design department at the Rhode Island School of Design in Providence. He plans to continue his firm and his commercial work in Providence, where he will commence his new duties in September.

Francis X. Boland has been named head designer of the Saxonville, Mass., division of Roxbury Carpet Co.

J. Donald Watson, Jr., has resigned his position as safety director for the South Carolina Industrial Commission and editor of the *Safety News Letter* to return to private work. He was succeeded by **L. E. Drummond,** formerly safety director for the Seminole Mills of United Merchants and Manufacturers, Inc., plant at Clearwater, S. C.

Harry Riemer, editor of the *Daily News Record,* has retired after completing 41 years with Fairchild Publications, Inc. **Stephen S. Marks**

Mr. Riemer

will assume the post vacated by Mr. Riemer. **Kenneth A. Howry** has been appointed associate editor, replacing Mr. Marks.

Arthur May, Tiesilks, Inc., has been reelected as president of the Tie Fabrics Association. Other officers elected were: **Edwin P. Grossman,** Town Textile Co., vice-president; **Samuel P. Schwartz,** Samuel P. Schwartz, Inc., treasurer; **Philip Slifka,** Bluebird Silk Manufacturing Co., secretary.

Ernest H. Allard has joined the Southern Research Institute staff in Birmingham, Ala., as senior textile chemist. Prior to accepting his present position, he was chemist for Merrimac Hat Corp.

Southern Textile Athletic Association has elected the following officers: **Driver B. Hendrix,** J. P. Stevens & Co., president; **John Millikin,** J. P. Stevens & Co., vice-president; and **Ken Pittman,** Monaghan plant of Stevens, secretary. New members of the executive committee are: **Vercho Carter,** Russell Manufacturing Co.; **Curtis Terry,** J. P. Stevens & Co.; and **Jim McDuffie,** Woodside Mills.

Byron A. Griffin, West Point (Ga.) Manufacturing Co., has been elected president of the Southern Textile Methods and Standards Association. Other new officers are **Charlie L. Land,** Woodside Mills, Greenville, S. C., vice-president; and **R. L. Altman,** West Point (Ga.) Manufacturing Co., treasurer. New directors are **Tom Williams,** Riegel Textile Corp., Ware Shoals, S. C.; **R. D. Sellers, Jr.,** Southern Bleachery, Taylors, S. C.; **George Funderburk,** U. S. Rubber Co., Hogansville, Ga.; and **W. A. Funderburk,** Kendall Co., Charlotte, N. C.

Wilton F. May has been elected president and general manager of Southern Worsted Mills, Inc., Green-

now cut your desizing costs

DE SIZE *with* EX SIZE-T®

QUICK-SAFE-SURE

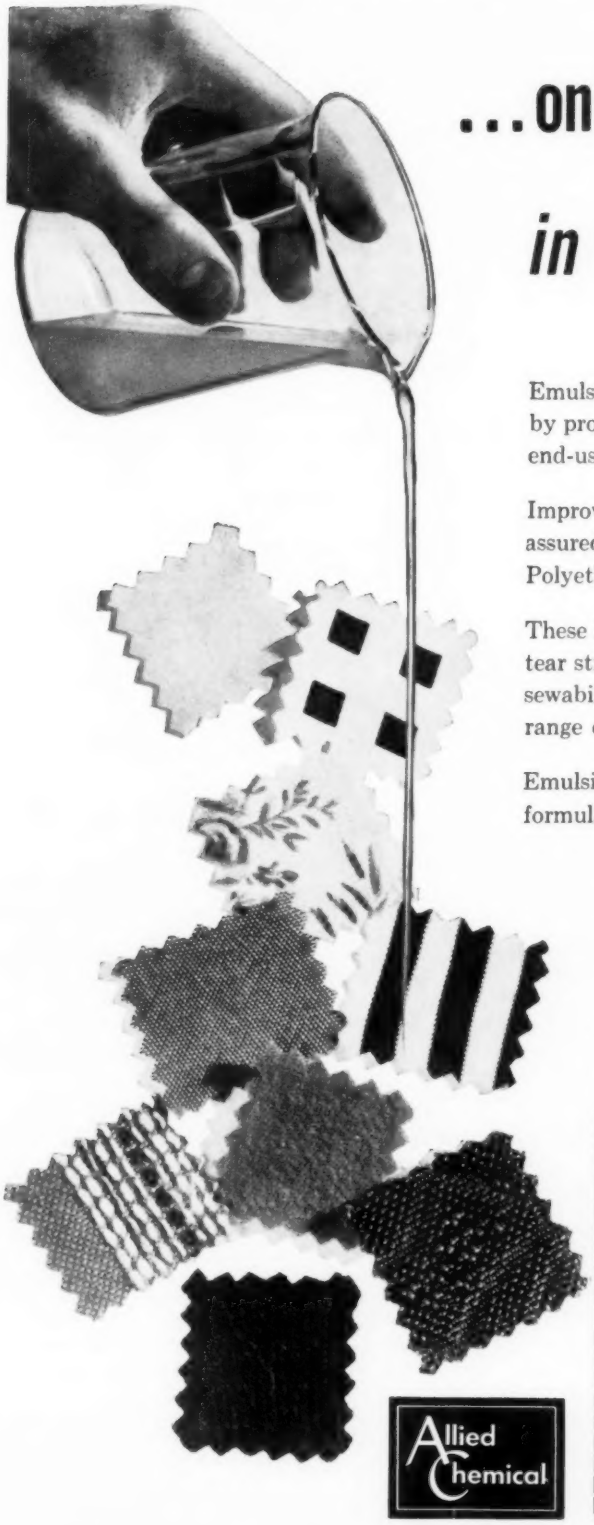
Exceptionally effective in high speed continuous desizing ranges due to its built-in heat stability.

For detailed information write...

PABST BREWING COMPANY
INDUSTRIAL PRODUCTS DIVISION
MERCHANDISE MART, CHICAGO 54, ILL.

PABST BREWERIES

GOOD NEWS IS POURING IN



...on A-C® Polyethylene in Textile Finishing!

Emulsifiable AC-Polyethylene 629 is now being used by progressive textile finishing plants for enhanced end-use fabric performance.

Improved and increased mechanical properties are assured when using Emulsions of this Polyethylene as a finishing agent.

These include: higher abrasion resistance, increased tear strength, reduced needle cutting, improved sewability, and better wash-wear finishes in a wide range of desirable hand properties.

Emulsions of AC-Polyethylene 629 properly formulated for textile uses will not retain chlorine; will not yellow whites; will not scorch at elevated temperatures; and will not affect dye shades or light fastness properties. Such emulsions are compatible with all common textile finishing agents.

Contact us for additional information on this new advance in textile finishing.

Allied Chemical

SEMET-SOLVAY PETROCHEMICAL DIVISION
Allied Chemical Corporation
Room No. 521-AW
40 Rector Street, New York 6, N. Y.

I am interested in AC-Polyethylene 629 for finishing____

_____

Name_____

Company_____

Address_____

City_____ Zone____ State____

Turn old yarn racks into new ones with

DIXISTEEL®

HOT-DIP GALVANIZING

Mills know the costly penalty of rusty yarn racks—and the high cost of replacement.

Your old racks can be made like new at a fraction of their original cost—simply by having them hot-dip galvanized.

Dixisteel Hot-Dip Galvanizing meets ASTM specifications. Small, tight spangles—smooth, uniformly heavy coats of zinc, without burrs or fins—assure complete satisfaction and positive protection against rust and corrosion.

Many textile equipment manufacturers and mills use our facilities to hot-dip galvanize racks, card holders, bobbin transports, pirn and pin trucks.

Find out how little it will cost to re-galvanize your equipment. Send complete description and dimensions for a free estimate without obligation.

MAKERS OF DIXISTEEL® SINCE 1901

Atlantic Steel Company

P. O. Box 1714, ATLANTA 1, GA. • TRinity 5-3441

Personal NOTES ABOUT MEN YOU KNOW

ville, S. C., succeeding **Walter S. Vanderbilt** who was named vice-president. Other officers are **Stanley H. Lawton**, vice-president and treasurer; **Horace D. Wood**, secretary and assistant treasurer; and **Grafton L. Wilson**, assistant secretary.

J. P. Stevens & Co. has appointed **Daniel B. Fuller** a vice-president. Mr. Fuller is president of D. B. Fuller & Co., a Stevens subsidiary.

Patrick F. Fahy has joined the staff of Robert S. Taplinger Associates, Inc., New York City, and will assist in the public relations program being conducted by that firm for the American Sheep Producers Council, Inc., to promote and publicize American-made wool products. Mr. Fahy has been connected with the woolen and worsted editorial and advertising fields for many years.

The Associated Men's Wear Retailers of New York has named **Jack A. Goldfarb**, president and board chairman of Union Underwear, as Man of the Year. He was chosen for his "outstanding achievements in promoting the interests of the industry."

Harold G. Miller, chairman of the board of Vanity Fair Mills, Inc., Reading, Pa., has also been named to the presidency, succeeding J. Neal Dow who resigned. **Robert G. Derx**, prominent in the company's sales activities, was appointed to the board and named vice-president in charge of marketing. **Charles A. Burg** succeeds Mr. Derx as vice-president in charge of sales. **Manford O. Lee** was appointed to a vice-presidency.

Charles F. Broughton has retired as vice-chairman of the board and as a director of Wamsutta Mills, New Bedford, Mass. He has been with the firm for 41 years.

S. B. Kitchings has accepted a position as assistant superintendent of the West Georgia Mills, Whitesburg, Ga. He will assume charge of the spinning and braiding operations of cotton and synthetic yarns under the direction of J. Ralph Hart, vice-president.

After 40 years of continuous service, **John A. Simmons, Jr.**, has retired as general manager of Lanett (Ala.) Bleachery & Dye Works div., West Point Manufacturing Co. His successor is **Richard D. Seed.**

R. L. Floyd, superintendent of the Union plant of Union-Buffalo Mills, has accepted a position as manager of a new textile plant at Teheran, Iran.

Lucien Bockstael is the new general manager of United Laces and Nets, Inc., Central Falls, R. I.

Fred C. Phillips has been named Fairfield County Outstanding Young Man of the Year by the Junior Chamber of Commerce, Winnsboro, S. C. Mr. Phillips is supervisor of labor standards for U. S. Rubber Company.

George Baldanzi was elected president of the United Textile Workers of America at the recent national convention. **Francis Schaufenbil**, acting president since the resignation of Anthony Valente, was elected secretary-treasurer.

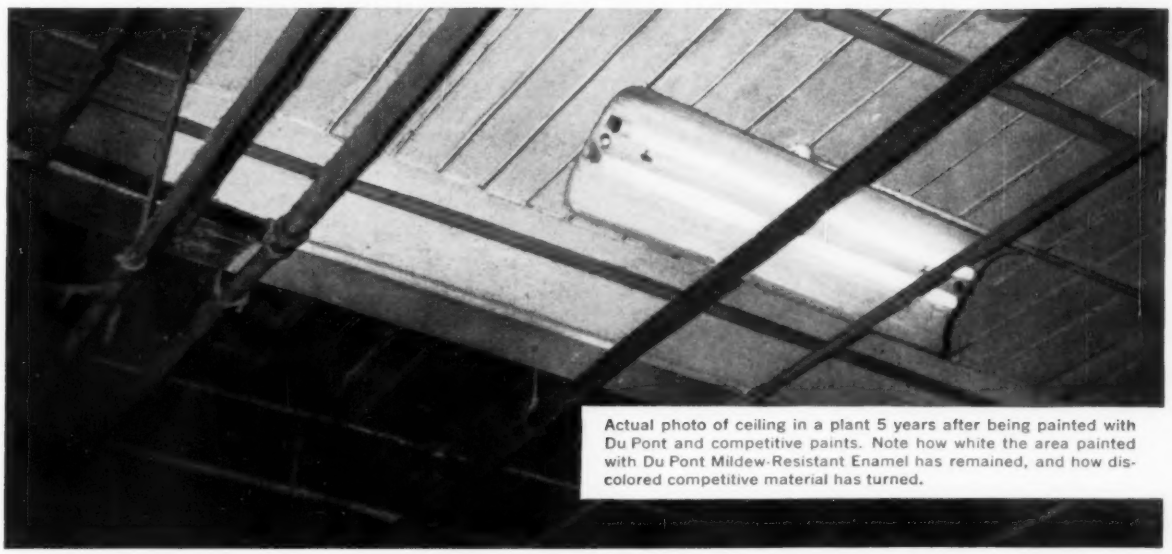
Joe V. Moffitt, president and treasurer of Wennonah Mills, has been named Lexington, N. C.'s "Man of the Year" for 1958.

Ray Steil has joined Westwood Knitting Mills in the newly-created position of vice-president in charge of merchandising and production. He was most recently assistant vice-president in charge of women's and children's sweater division of Catalina, Inc., division of Julius Kayser & Co.

The West Point (Ga.) and Valley chapters of the Junior Chamber of Commerce have named **Robert William Stephenson, Jr.**, "Young Man of the Year." Mr. Stephenson is associate editor of "The Westpointer," plant publication of West Point Manufacturing Co. * * * **Byron A. Griffin**, West Point Manufacturing Co., has been elected president of the Southern Textile Methods and Standards Association. Other new officers are: **Charlie L. Land**, Woodside Mills, vice-president; and **R. L. Altman**, West Point Manufacturing Co., treasurer. * * * **Joseph L. Lanier**, president of West Point Mfg. Co., has been named a member of the Commerce Department's Business Advisory Council.

Albert I. Darbey has been promoted to overseer of dyeing at Strong, Hewat & Co., North Adams, Mass. He succeeds Harry Leaver, who has resigned.

THE PROTECTION LASTS WITH DU PONT MILDEW-RESISTANT ENAMEL



Actual photo of ceiling in a plant 5 years after being painted with Du Pont and competitive paints. Note how white the area painted with Du Pont Mildew-Resistant Enamel has remained, and how discolored competitive material has turned.

It's odorless! Cuts maintenance costs!

Solves mildew and maintenance problems in hundreds of textile plants

Tests prove that in most types of textile plants, "Dulux"® 878 High-Hiding Mildew-Resistant Enamel, Gloss White effectively retards mildew formations for months . . . eliminates the need for constant cleaning and scrubbing. It also resists chipping and cracking . . . stays bright looking. Like all Du Pont Maintenance Paints, it's pre-tested until perfect for your job. For complete information, mail the coupon . . . now!

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division, Dept. TI 86
Wilmington 98, Delaware

Gentlemen: Please send me, without obligation, free literature on how to combat mildew.

Name _____ Title _____

Company _____

Address _____

City _____ State _____

ROTARY UNION

Trade Name — Patented

When used alone, both the Unitrap (steam trap) and the Rotary Union (rotating joint) greatly improve steam line performance. The Unitrap's trigger action and tremendous capacity automatically deliver peak efficiency at all pressures from 0 to 250 lbs. without changes or adjustments. The self-adjusting and self-aligning precision mechanical seal of the Rotary Union assures a positive rotating seal which outlasts all others.

When used together, these fine PSC units give you the ultimate in performance and economy. Try this team on your slashers, dry cans, calenders, embossers, etc. and you'll be convinced. Ask for Bulletins 800 and 700.

"WHERE *Good Connections* COUNT"®

Unitrap*

* Reg. Trade Name

PERFECTING SERVICE COMPANY, 332 Atando Ave., Charlotte, N.C.

Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland—Los Angeles
New York—Providence—Hamilton, Ont.—Montreal—Toronto

DURANT DOFFMETER

Model 3-DM
Alaska Gray and
Seal Brown finish

Specifically Designed
for LOOM APPLICATIONS

The Durant Doffmeter is a compact, predetermined counter designed to cut off the loom or signal when the preset number of yards is reached. Eliminates cut marks and waste ends by assuring uniform yardage . . . simplifies inventory control.
Present day high costs make the installation of Durant Doffmeters on every loom a practical money saving investment. Plan now . . . write or contact us for detailed information.

ELIMINATE OVERRUNS

Warns operator or stops machine when run is completed. Yes — eliminates annoying underruns, too!

UNIFORM LENGTHS

Easy, accurate way to assure uniformity in lengths of cloth or yarn.

MAXIMUM PRODUCTION

A Durant Doffmeter takes the responsibility — operator can do other work.

Send for Catalog No. 501

DURANT MFG. CO.
1973 N. Buffum St., Milwaukee 1, Wis.
73 Thurbers Ave., Providence 5, R. I.
Representatives in Principal Cities

PRODUCTIMETERS
SINCE 1879 *Count Everything*

Personal NOTES ABOUT MEN YOU KNOW

John Cash, formerly with Miron Mills, Clinton, Mass., is now overseer of weaving at Peter Karen Manufacturing Co., Pawtucket, R. I.

Edgar Barelle is now overseer of carding and **Wilfred Gagnon** is overseer of spinning at Nashua (N. H.) Textile Co.

OBITUARIES

Billy P. Barnes, 58, retired vice-president of Dixie Mercerizing Co., Chattanooga, Tenn.

Louis Birkenfeld, 59, owner and founder of Dale Knitting Mills, New York City.

Walter Guy Efird, 69, retired textile executive, Albemarle, N. C.

Murray Feiner, 39, head of styling and development, synthetic div., Malden (Mass.) Knitting Mills, Inc.

Carl Clinton Finney, 46, supervisor Lee Dyeing Co., Durham, N. C.

Marcus C. Gross, former superintendent of Merrimack Mfg. Co., Lowell, Mass., and a long-time contributor to TEXTILE INDUSTRIES under his own name and under the pen name "Maley Chagro."

Hans Halbach, 54, superintendent of production planning at Berkshire Knitting Mills, Reading, Pa.

Herbert H. Hughes, 58, chairman of the board of Cotswold Fibres, Inc., Columbus, Ga.

Richard T. Kinsman, Atkinson, Haserick & Co., Inc., Boston, Mass.

Samuel Littleton McClure, 80, retired textile plant superintendent, Jamestown, N. C.

Robert King McCuen, 80, retired textile plant superintendent, Greenwood, S. C.

Arlan P. Mosser, 55, treasurer of Windsor Knitting Mills, Inc., Hamburg, Pa.

Sidney Hall Phillips, 54, vice-president of Linwood (N. C.) Mfg. Co.

T. Ellis Ramsdell, 80, retired textile mill president, Great Barrington, Mass.

Charles W. Riddle, 64, decorative fabrics division of Burlington Industries, Graham, N. C.

Robert A. Scott, 85, retired knit goods executive, Danvers, Mass.

George Brumby Sessions, superintendent of Newberry (S. C.) Mills, Inc.

Harold E. Smith, chairman of the board, Wallerstein Co., Madison, N. J.

Willard F. Staples, 65, well-known textile figure, New Bedford, Mass.

What the TEXTILE MILLS are doing

Certificate of incorporation has been issued to **Ann Knitting Mills, Inc.,** Lincolnton, N. C. Incorporators are Mercer W. Simmons, A. D. Allison, and H. B. Caldwell, all of Lincolnton.

A new narrow fabric plant, designated **American Velcro, Inc.,** is being opened in Manchester, N. H. When installation of machinery is completed, the company will have fifty looms in operation.

Bibb Mfg. Co., Macon, Ga., has purchased **Ensign Textile Mills,** Forsyth, Ga., and plans are to begin operation of the plant upon completion of installation of woolen system equipment for production of yarns. Between 100 and 125 persons will be employed at the mill, which was last operated as a unit of the Brighton Division of Burlington Mills.

Bigelow-Sanford Carpet Co., Inc., has discontinued yarn and velvet carpet manufacturing at Thompsonville, Conn. The company's southern plants are now being used for these operations. Bigelow president Lowell P. Weicker has announced plans to sell the Thompsonville land and buildings and lease back for a limited period of years those areas required for Wilton and Axminster operations. He said that by the end of the year, more than 80 per cent of manufacturing operations in the company's carpet division will be conducted at southern locations.

Brenham (Tex.) Cotton Mill has announced plans for expansion that will give employment to 75 new operatives.

Burlington Industries has transferred the Modena plant in Gastonia, N. C., from the Cramerton division to the Klopman Mills division of Burlington Mills.

Cabin Crafts, Inc., Dalton, Ga., has announced plans for a million dollar expansion program for the firm's floor coverings division. Contracts have been let for a 75,000 square foot addition to the relatively new Springdale plant, expected to cost just under half a million dollars. Occupancy has just been completed on a $180,000 addition to the Springdale plant which increased floor space by 25,000 square feet. The firm's yarn mill will have invested by the end of 1958 approximately $350,000 in long staple and new processing equipment, according to Robert G. McCamy, president.

Callaway Mills Co., LaGrange, Ga., recently offered its employees a course on organization of thought and expression of ideas. The course, presented in six sessions, was conducted by Dr. Waights G. Henry, president of LaGrange College.

Casco Laces, Inc., and its affiliated plant, **Maine Lace Finishing Co.,** are

*13¾" and 21" diameter heads

MILTON BEAMS*
(for Nylon and rubber yarns)
GIVE YOU THE BIG BONUS OF

SUPER STRENGTH

The super strength of Milton's forged head Tricot and Raschel Beams is no idle claim—it's been proven by yarn producers, big mills and small mills alike!

They're light in weight, yet rugged in design to give true dimensional stability without objectionable deflection or distortion. Milton's forged, heat-treated aluminum alloy heads and extra heavy barrels become a one-piece beam by the continuous weld process first introduced in the field by Milton. Trapped ends of yarn or misalignment of keyways are eliminated because there are no mechanical joints!

You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

WRITE FOR FREE BULLETINS . . . No. 49-A on Light Metal Beams and No. 54-S on Steel Beams. The Milton line includes warp beams for broad, narrow fabric, velvet and carpet looms, as well as light metal raschel, tricot and section beams.

Over a Quarter Century of Dependability in Yarn Beams

MILTON MACHINE WORKS, INC.

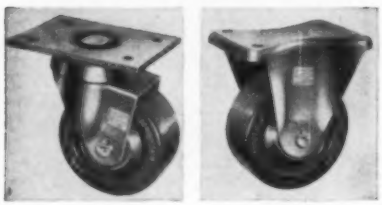
DESIGNERS • ENGINEERS • MANUFACTURERS

MILTON • PENNA.

LOOKING FOR WAYS TO SAVE MONEY?

It pays to Specify

DARNELL CASTERS WITH PHENOLIC (DARNELLOPHEN) WHEELS



- No rusting or corroding
- Non-marking
- Quieter rolling
- Will stand temperatures up to 200° F.
- High impact strength
- Resist oils, greases and most chemicals
- Wheels have beveled edges—protect floors better.

NEW Manual

WRITE FOR YOUR FREE COPY

Will help make your selection easier consult the yellow pages

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

What the TEXTILE MILLS are doing

moving from Freeport, Me., to Rhode Island. Machinery will be installed in three lace mills in Coventry and Hope Valley, R. I.

The William Carter Co. has donated land in Needham, Mass., to the government for a new post office. One of the two houses now standing on the land was the home of the founder of the firm, William Carter, and the homesite of Carter's first manufacturing operations.

Conant Finishing Co. is in operation in Pawtucket, R. I., under the management of Theodore Scheitlin. Mr. Scheitlin also manages the Rockville (Conn.) Processing Co.

An attractive four-color brochure entitled "The Story of Cone Mills," is currently being distributed by **Cone Mills Corp.**, Greensboro, N. C. The illustrated booklet, dedicated by company president Ceasar Cone to "the employees, stockholders, customers, and neighbors" of Cone, gives a brief but comprehensive outline of Cone's history from its inception to the present multi-plant operation.

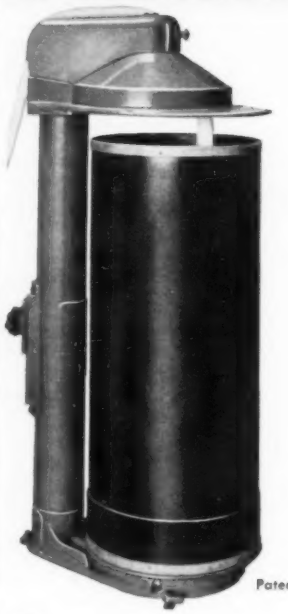
Crown Chenille Co., Chatsworth, Ga., is planning to enlarge its present facilities by 20 per cent. It is a subsidiary of Crown Curtain Co., Philadelphia.

A new building has been constructed on Stadium Drive in Spray, N. C., to house the general offices of **Fieldcrest Mills, Inc.** Occupation of the new quarters released some 30,000 sq ft of space which can now be used for manufacturing purposes. Located approximately equidistant from the company's three mill areas, the new building is expected to increase efficiency of operations through consolidation of staff departments and offices.

Franklin Finishing Corp. has been organized in Paterson, N. J., replacing Franklin Finishing Co., Inc., which ceased operation recently. Robert Fiory, formerly treasurer of Franklin Finishing Co., is president and treasurer of the new firm. Joseph Calderini is secretary.

New draperies, chairs, silver, and dishes have been provided in the employee cafeteria at **Fulton Bag & Cotton Mills**, Atlanta, Ga. Other improvements planned include air con-

McDONOUGH UNIVERSAL CARD COILER



Finest COILER you can buy!

- Saves up to 33% card room labor
- Easiest to install and service
- Lowest maintenance cost
- Takes less floor space
- Built to last longer
- Ball bearings, hardened gears and rolls
- For cotton — wool — synthetics
- Head and base swivel
- Fits any make card
- Protected by US Patent No. 2,832,099. Other patents pending.

McDonough Universal is the best buy because of its design, precision and quality construction. Let us prove it in your mill. Free folder on request.

Since 1890

McDONOUGH
Power Equipment, Inc.
MACHINE & FOUNDRY DIVISION
McDonough, Georgia, U. S. A.

ditioning and taped music. * * * Stockholders have approved a pro-rata retirement of 240,000 shares of the company's common stock, representing half of the 480,000 shares outstanding. This represents funds no longer required in the business operation, according to Jay Levine, chairman of the board. The company recently sold its branch bag manufacturing plants outside Atlanta to concentrate on the more profitable business of its integrated Atlanta textile mill.

Georgia Hosiery Mills is moving its main plant from Blakely, Ga., to Cave Springs, Ga. Knitting operations are also being established in Rome, Armuchee, and Villa Rica, Ga.

Groval Knitted Fabric, Inc., has taken over the dyehouse of the former Amoskeag-Lawrence Mills in Manchester, N. H. Six knit goods dyeing machines are presently in operation.

A world championship rodeo was recently staged in Memorial Coliseum,, Winston-Salem, N. C., under the joint sponsorship of **P. H. Hanes Knitting Co.** and Blue Bell Corp. Proceeds from the event were donated to youth activities funds of city and county schools in Guilford and Forsyth counties.

A new synthetic weaving plant has opened in Pawtucket, R. I., under the name of **Harmony Mills.** Equipment includes 160 looms.

Herlich Knitting Mills, Philadelphia, Pa., has changed its name to **Jefferson Knitting Mills.** Irwin Shapiro is president and Sol Shapiro is secretary.

Hildebran (N. C.) Hosiery Mill has recently completed a 3,000 sq ft addition to its plant for packing and shipping operations. This, with the anticipated installation of new equipment, is expected to up its production capacity by approximately 25 per cent. Equipment scheduled for installation includes 24 knitting machines, 96 boards, six loopers, and a new extractor and tumbler in the dye house. Besides increasing production capacity, the new machinery will make it possible to add women's socks to the present line.

Construction is underway on an addition to the **Old Fort (N. C.) Finishing Plant.** The new building will provide 62,000 sq ft of floor space and will be used as a warehouse.

The Lawrence (Mass.) Mills of Mount Vernon Mills, Inc., has ceased production. Popularly known as **Lawrence Duck Co.,** the 105-year-old industry was Mount Vernon's only northern operation and produced dryer felts for the paper manufacturing trade. These products are also produced at the company's Columbia, S. C., mill.

Prestige, Inc., New York City, has announced the development of self-gartered stockings which can be worn either over the knee or under it. The product, which will be shown to the trade under the "Roll-Edge" name, is the result of the joint effort of company president Sam Burd and Joseph V. Clarke, vice-president in charge of production. Patent has already been granted for the manufacturer's protection.

Completion of a 12,000 sq ft addition to **G. H. Rauschenberg Co.,** Dalton, Ga., marks expansion of the carpet manufacturing plant to 20 times

NON-FLUID OIL
TRADE MARK REGISTERED

FOR BETTER SPINNING

In your spinning room, smooth, dependable operation is essential for quality yarn production. This means you should use NON-FLUID OIL, the lubricant that stays in the bearings, regardless of speed and temperature.

Ordinary oils creep or spatter out of spinning frame roll stands, causing high oil and application costs, plus damaged roll covers and stained yarns.

NON-FLUID OIL stays in roll stands—lubricating dependably until entirely consumed—and protects roll covers and saves on oil and application expense.

Get positive proof of this performance of NON-FLUID OIL. Send for Bulletin T-13 and free testing sample . . . no obligation to you.

NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE., NEW YORK 17, N. Y.
WORKS: NEWARK, N. J.
So. Dist. Mgr.: Lewis W. Thomason, Jr. Charlotte, N. C.
WAREHOUSES

Birmingham, Ala.		Greensboro, N. C.
Atlanta, Ga.	Greenville, S. C.	Detroit, Mich.
Columbus, Ga.	Chicago, Ill.	Providence, R. I.
Charlotte, N. C.	Springfield, Mass.	St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

PROPER UTILIZATION

OF

LABOR

EQUIPMENT

MATERIALS

CAN MEAN A HEALTHIER PROFIT PICTURE FOR YOUR MILL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"We have been well pleased with the services they have rendered us. They have well trained engineers, and we highly recommend them."

*A SOUTHERN MANUFACTURER OF HOSIERY AND UNDERWEAR YARNS**

*Name on request

WRITE FOR FREE COPIES

OF

★ LABOR & MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES.

★ A FAIR DAYS PAY AND IN RETURN, A FAIR DAYS WORK.

AMERICAN ASSOCIATED CONSULTANTS INCORPORATED

D. S. KEOGH, President

250 Park Avenue — New York 17, N. Y.
Grant Building — Pittsburgh, Pa.
206 Edificio Pestrada, Medellin, Colombia, S. A.

What the TEXTILE MILLS are doing

its original size in 1952. Plans call for installation of new type tufting machinery for production of broadwidth carpets of a design that cannot be made on existing equipment.

The Worcester (Mass.) Knitting Co. has purchased two of the seven buildings recently sold by Roxbury Carpet Co. The two buildings provide 100,000 sq ft of working space. Also purchased by the firm was a parking lot with 17,000 sq ft of space and 50,000 sq ft of land on which the building stands. When move to the new location is completed, about 250-300 people will be employed.

Roxbury Carpet Co. has announced completion of an improvement program at the Whittall Mills in Worcester, Mass., acquired by Roxbury in 1956. A new building provides 148,000 sq ft on the first floor for manufacturing and 108,000 sq ft on various levels for storage. Three new 15' Wilton looms, one 6' Wilton loom, one 15' carpet dryer, and one 15' carpet shear, have been installed. Power plant equipment has been converted to utilize oil instead of coal as fuel.

Standard Romper Co., Inc., knitters of children's wear, have moved from Central Falls, R. I., to new and larger quarters in the Coats and Clark mill yard in Pawtucket, R. I.

All capital stock of Hudson Narrow Fabric Mill, Easley, S. C., has been acquired by **Southern Weaving Co.,** Greenville, S. C. It will operate as a wholly-owned subsidiary, with J. G. Brock in charge of the plant.

Two hundred new 50" looms have been installed in the Beaumont Plant of **Spartan Mills,** Spartanburg, S. C. Spinning department improvements include installation of new spindles and blower cleaners.

All knitting operations of **Thornton Knitting Co.,** Denton, N. C., are now located in the company's newly constructed addition. Finishing operations are being carried on in the old plant space.

Van Raalte Co., New York City, has announced plans to spend $600,000 for additional seamless hosiery machines during 1958. These will be installed in existing facilities and for the usual replacement of old or obsolete equipment.

A new firm, **Kelley Carpet Co. of Ga.,** is now in production at Franklin, Ga. The plant manufactures regular and novelty throw rugs.

An expansion program, designed to increase the production capacity of its **Kennebec Woolen Mills,** Fairfield, Me., by about 25 per cent, has been launched by R. G. Fromkin Co. Fromkin is also expanding its range of fabrics for the women's trades.

The Kendall Co. has sold its Thrift, N. C., plant to a syndicate which hopes to re-let it for textile operations. Kendall has leased back one of the smaller buildings for use as a research and development center.

A 10-week course in human relations was recently completed by management personnel of **Kingston (N. Y.) Knitting Mills Co., Inc.,** and **Barclay Knitwear Co.**

Upon completion of a new 38,500 sq ft addition to existing facilities in Dalton, Ga., the **Mayfair Chenilles, Inc.,** division of Collins & Aikman Corp., moved its tufting equipment from Calhoun, Ga., to Dalton. Now all manufacturing operations of the division are performed in Dalton.

The Mebane, N. C., division of **Rockfish-Mebane Yarn Mills, Inc.,** has won the President's safety award by completing 1957 without a lost-time injury. This is the third year in a row that personnel at Mebane have received this honor.

Merriman Knitting Mills, Inc., has opened in Franklin, N. H., with 124 seamless hose machines in operation. Alfred J. Traverse is treasurer and general manager.

Liquidation of the grey goods mill of **Merrimack Manufacturing Co.** was begun recently in Lowell, Mass.

The mill in Strausstown, Pa., formerly owned by the H. W. Anthony Co., has been acquired by the John E. Morgan Knitting Co. The plans are to manufacture men's and boys' underwear under the name of **JEM Knitting Mills Corp.**

Northern Dyeing Corp., Washington, N. J., has recently announced the purchase of a special compressive shrinkage range, which will enable the company to process the various wash-and-wear fabrics. At the same

time, a gas-fired loop dryer was installed which will complement the work done on a pad roll dye machine.

Walco Manufacturing Co., Miami, Fla., beach coat and quilted robe producer, has acquired ten looms and is now weaving its own terry cloth, according to company president Philip Waldman. Novel surface effects will be emphasized.

A program to expand the weaving facilities at the Easley, S. C., plant of **Woodside Mills** has been instituted. Plans include installation of a completely new air change system in the new basement weaving annex. The room will contain 3,500 sq ft of floor space and 56 44" looms.

Jacquard designing

(from page 163)

the complexity of the card-cutting instructions; however, good designing can be of help in this regard as well. All paint should be carefully applied to the design so that the card-cutter will have no difficulty in following each separate color. This means that each square should be clearly outlined without smears or uneven or ragged edges.

On multi-color designs, care should be exercised in the selection of the colors used so that each effect will stand out clearly and distinctly. Careful designing will help to eliminate card errors as well as to make the reading of the design easier for the card-cutter, thus increasing his production and reducing the cost of the Jacquard cards.

In conclusion, it will be noted that the successful Jacquard designer needs to be competent in freehand drawing and have a complete knowledge of weaves, fabric construction, Jacquard harness ties, and the capabilities and limitations of the designated looms. He should know ways and means of simplifying Jacquard designs in order to lower the cost of their preparation, also of card-cutting requirements in order to produce the cards at a minimum outlay of time and money. If these conditions are met, the completed designs, properly styled and colored for the fabrics involved, will be a big asset in selling the product of the mill.

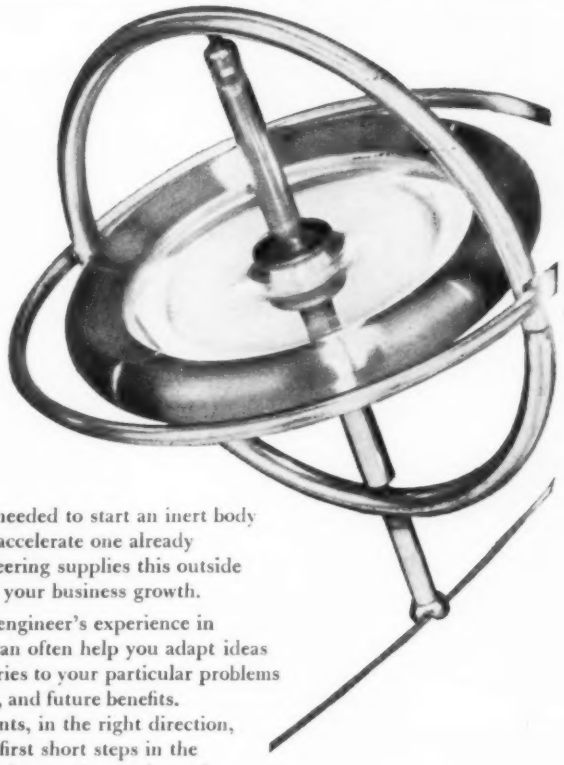
SUPPLIERS News

WHAT THEY ARE DOING

Rhodia, Inc., has announced name changes in Rhovyl fibers. In reporting these changes in the April issue of TEXTILE INDUSTRIES; the names were inadvertently transposed. The correct changes are as follows: Fibravyl, changed to Rhovyl-55; Retractyl-30, changed to Rhovyl-30; Retractyl-15, changed to Rhovyl-15; and Thermovyl, changed to Rhovyl-T. The editors apologize to Rhodia for any inconvenience this may have caused.

Parks & Woolson Co., Springfield,

INERTIA WORKS TWO WAYS



External force is needed to start an inert body moving . . . or to accelerate one already in motion! Engineering supplies this outside force to stimulate your business growth.

The professional engineer's experience in many industries can often help you adapt ideas from other industries to your particular problems . . . for immediate, and future benefits. Minor improvements, in the right direction, often become the first short steps in the ultimate program that can be accelerated when the time is right for you.

The independent, impartial engineer helps you develop a sound long range plan consistent with your individual needs.

Engineers for 56 Years

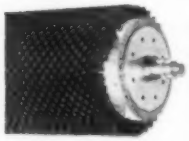
J. E. SIRRINE COMPANY
GREENVILLE • SOUTH CAROLINA

A DEPARTMENTALIZED ENGINEERING ORGANIZATION SERVING BUSINESS, COMMERCE AND INDUSTRY

YEARS
OF SATISFACTORY MILL SERVICE WITH JENKINS' METLKOR BRUSHES

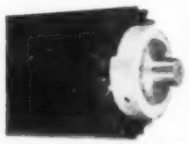
BRVM Motorized HERMAS Mode Vertical Brushing Machin

"The high quality standards set by our engineering department for brushes used in our machines are amply covered by Jenkins' METLKOR Brushes. They have stood years of satisfactory mill service for our customers and, of course, for us," stated Mr. Robert Simpson, Sales Representative of Hermas Division, Curtis and Marble Machine Company. Hermas has proven the efficiency of Jenkins' METLKORS — the long lasting brush that can be rebristled. If you have any standard or special brush problems, write us today.



METLKOR brush used in Hermas Brushing Machine: precision made, accurately balanced. Filled with efficient long life Dupont "Tynex" Nylon. Available in fibre, hog bristle, etc.

METLKOR brush used in Hermas Shearing Machine: tufted construction, ruggedly built, refillable when worn. Available in fibre, hog bristle, Dupont "Tynex" Nylon, etc.



METLKOR brush used in Hermas Beaming, Measuring and Brushing Machine: light weight, for long trouble free life. Available in fibre, hog bristle, Dupont "Tynex" Nylon, etc.

Specify Jenkins' METLKOR the original . . . the best *Metal Core* brush

METLKOR®
CYLINDER BRUSHES
and **LIFEWOOD®** WOOD BACKED BRUSHES

M. W. JENKINS' SONS, INC.
— Serving Industry for 80 Years —
532 Pompton Ave., Cedar Grove
Essex County, N. J. • CEnter 9-5150

SUPPLIERS News
WHAT THEY ARE DOING

Vt., has been acquired by **Riggs & Lombard, Inc.** Parks & Woolson personnel are now located in the Riggs & Lombard works in Lowell, and all manufacturing will be carried on there. The newly acquired operation will be conducted as a division of Riggs & Lombard.

The Saran Yarns Co., Odenton, Md., has appointed Arthur E. Young to the board of directors.

Singer Sewing Machine Co. has established a full-scale manufacturers agency in Nashville, Tenn. Formerly a branch of the Atlanta agency, the Nashville office will now be responsible for sales and service throughout the entire state of Tennessee. Sam W. Jones, Jr., has been advanced to general agent to head the newly established agency.

American Cyanamid Co. has appointed R. W. Angstadt as southern manager of the dyes department and Q. M. Rhodes as southern manager of the textile chemicals department,

Mr. Angstadt

Mr. Rhodes

Organic Chemicals Div., with headquarters in Charlotte, N. C. * * * J. N. Grant has been named a sales assistant and J. E. Moore has been appointed assistant to the manager of the dyes department of Organic Chemicals Div.'s Charlotte branch.

Harry E. Miles has been elected a vice-president of **Container Corp. of America.** He was formerly vice-president and director of The Mengel Co., a Container Corp. subsidiary. In his new post with the parent company, Mr. Miles will be responsible to Donald H. Brewer, senior vice-president in charge of the container division.

Courtaulds (Alabama) Inc. has appointed William H. Ward to the position of sales manager. He will continue to make his headquarters in Greensboro, N. C.

Curtis & Marble Machine Co. has started construction of a new building in Greenville, S. C., to serve as southern sales and service center. Jack Federline, who has been in charge of the southern territory for the past several years, will direct the new facility. He will be assisted by Jack Stanley in the sales department and Thure Bylund with the textile mills maintenance and repair service program. The front section will serve as a sales and service office, while the rear and larger section will be used as a depot for sewing machine and cloth folder replacement parts, as well as for repair and maintenance work on most makes of shear revolvers and ledger blades.

J. M. Cook has been named vice-president in charge of marketing of **Cutler-Hammer, Inc.,** and P. S. Jones has been appointed senior vice-president. Mr. Jones plans to retire at the end of the year and Mr. Cook's appointment was made at this time so necessary changes can be made. In his new position, Mr. Cook will assume direction of all the firm's sales functions. Serving on Mr. Cook's immediate marketing staff are: E. B. Fitzgerald, apparatus sales manager; L. P. Niessen, advertising and public relations manager; F. A. Wright, general sales manager; R. C. Monahan, marketing research manager; and H. B. Phillips, quantity sales consultant.

The Textile Fibers Department of the James River Division of **Dow Chemical Co.** is now occupying its new quarters in Williamsburg, Va. * * * Richard G. Mansfield has been assigned to Dow's Boston sales office. He is the first representative of Dow's textile fibers department to cover mills and sales contacts for Zefran in the New England area.

The Duplan Corp. is expanding its New York sales office by transferring Frank D. McKay, Jr., from Winston-Salem, N. C. He will work with Frank Collins in servicing the territories in Pennsylvania, New Jersey, New York, and New England.

Emery Industries, Inc., has moved its Philadelphia sales office to 4343 E. River Dr. The expanded facilities are expected to allow Emery to offer increased service to greater Philadelphia accounts.

Southern States Equipment Corp., Hampton, Ga., is planning an expansion program expected to cost more than a quarter of a million dol-

lars. Plans include a modern steel and masonry addition of approximately 32,500 sq ft for the Hampton plant, enlargement of office and cafeteria space, a larger and more convenient parking area, and a new rail and truck entrance.

Steel Heddle Mfg. Co. will hold a series of product exhibits in the New England area. They are scheduled for June 9 and 10, Sheraton-Biltmore Hotel, Providence, R. I.; June 12, Eastland Hotel, Portland, Me.; and June 13, Andover Inn, No. Andover, Mass. The full line of products will be displayed and two forums will be scheduled each day to discuss care and repair of shuttles and reeds.

Charles M. Hammer has joined the headquarters staff of **F. J. Stokes Corp.**, Philadelphia, as product specialist on vacuum processing equipment.

The Du Pont Co. is building a multi-million dollar plant to produce "Dacron" polyester fiber on a site adjoining its rayon manufacturing unit at Old Hickory, Tenn. The plant will be in addition to Du Pont's rayon and cellophane operations there. Design calls for an ultimate production of 56,000,000 lb annually of "Dacron" staple and filament products. Initial staple production is scheduled for the middle of 1959.

Charles F. Doepke has been named manager of public relations and advertising for **Fairbanks, Morse & Co.** He succeeds Henry J. Barbour, who will remain with the corporation as counselor on public relations and advertising.

William K. Hunton of Hunton Agencies, Dundas, Ont., has been appointed sales representative in Canada by **Fidelity Machine Co.** He will represent the company's line of circular knit hosiery machines and accessory equipment.

The Foxboro Co. has named John E. Hewson manager of the New York sales region, supervising instrument sales activities in New York City and sections of Connecticut and New Jersey. He succeeds E. H. Huckman, who assumed the position of assistant field sales manager.

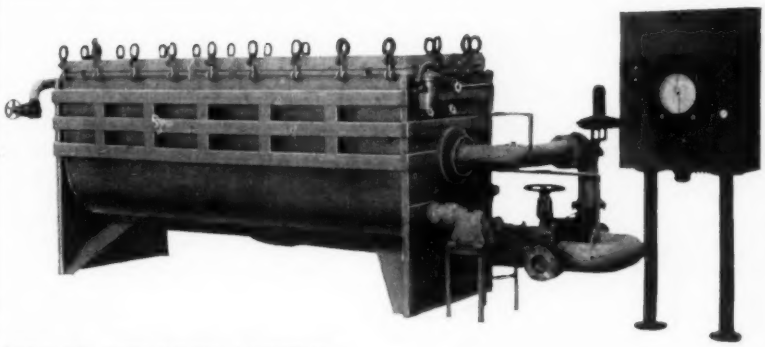
L. W. Adams has been named manager of V-belt sales for the **Goodyear Tire and Rubber Co.**, replacing J. R. Taylor, who is retiring. Mr. Adams will operate from the firm's belting plant at Lincoln, Neb. * * * R. G. Luskin has been appointed West Coast district manager for Goodyear's Chemical Div.

W. Kirk Wyatt has been named vice-president of **Turbo Machine Co.**, Lansdale, Pa.

R. I. Dalton, Jr., has been promoted to the main sales office of **Whitin Machine Works**, Whitinsville, Mass. J. L. Orr succeeds him as southern agent in Charlotte, N. C. * * * Frederick A. Odell has been appointed assistant manager of the export sales division of Whitin Machine Works, with headquarters at the main office in Whitinsville.

A new consulting and design engineering concern, known as **Eastern Engineering Co.**, has been formed in Atlanta, Ga., to work with the textile and other industries. J. W. Howard, formerly with J. E. Sirrine Co., will serve as textile engineer. Mr. Howard's background includes 13 years experience in the textile engineering field.

NEW GASTON COUNTY TRICOT DYEING MACHINES



HIGH TEMPERATURE

Developed primarily for dyeing tricot knitted fabrics, wound on perforated dye beams, at temperatures above the boiling point, this machine can also be used for dyeing at conventional temperatures below boiling. For the latter, lid may be removed or left in place.

Available for cloth 120" wide, up to 2,000 yards in length. Has been used successfully for dyeing woven as well as knitted fabrics.

Also available—open-type machine for dyeing open-width woven or knitted fabrics, laces, marquisettes and open-weave cloth, up to 72" wide and 8,000 yards in length.

OUTSTANDING NEW FEATURES

COMPLETELY AUTOMATIC FLOW CONTROL—Flow control valve is always closed when dye pump is not running. Desired dyeing pressure is pre-set on control panel, pump is started and pressure is then maintained at set point throughout the entire dyeing cycle. Thus a constant flow without surges is assured.

AUTOMATIC BEAM REVOLVING DEVICE—The dye beam is revolved by a constant speed driving mechanism and this assures even penetration during the scouring and dyeing cycles. This feature minimizes shading and produces level dyeing from end to end of the dye beam.

ROLLER TYPE BEAM SUPPORTS—If the automatic revolving mechanism is not purchased the dye beam can be rotated manually in open-type machines.

GASTON COUNTY DYEING MACHINE CO.

Pioneers in Automatically Controlled Dyeing Machines

Stanley, North Carolina

A. R. Breen
80 E. Jackson Blvd., Chicago, Ill.

Gaston County Dyeing Machine Co.
Terminal Bldg., 68 Hudson St.
Hoboken, N. J., G. Lindner, Mgr.

Albert P. March
Whitemarsh, Pa. Philadelphia
ADams 3-2901

The Rudel Machinery Co., Ltd.
614 St. James St. W. Montreal
260 Fleet St. E., Toronto

SUPPLIERS News
WHAT THEY ARE DOING

Mr. Hargrove
Reichhold Chem.

Mr. Spears
Mt. Hope Mach'y

Mr. Hill
Hyster Co.

Mr. Hall
Emkay Chem. Co.

Raymond W. Hargrove has accepted a position as sales manager, Textile Resins, Central Atlantic Div., **Reichhold Chemicals, Inc.** With headquarters in Charlotte, N. C., Mr. Hargrove will service textile customers primarily in Virginia and North and South Carolina.

National Vulcanized Fibre Co. has moved its mid-west headquarters to a new building in the Broadview section of suburban Chicago. The building incorporates fabricating facilities, sales office, and a warehouse and provides over 30 per cent additional capacity over the old quarters.

The New York executive offices of **Penick & Ford, Ltd., Inc.,** are now in the newly-constructed building at 750 Third Ave. * * * O. H. Tousey, a vice-president of Penick & Ford, has been elected a director of the corporation. He will continue in charge of bulk product sales. * * * J. S. Ragland, controller, has been elected treasurer of Penick & Ford.

William A. Popp & Associates, carded and combed yarns, have moved to new and larger quarters at The Benson-East, Jenkintown, Pa.

Tom J. Hall has been appointed by **Emkay Chemical Co.** as sales representative and technical demonstrator in the North and South Carolina area. His headquarters will be in Lexington, N. C.

With the purchase of the assets of The Tipp Manufacturing Co., **American MonoRail Co.** has added a low-cost overhead cable conveyor to its present line of products. The conveyor line will be marketed under the name American "Cable-Way" Conveyor.

Barnebey-Cheney Co., Columbus, Ohio, has announced the purchase of exclusive rights to manufacture and sell carbon wool, a new form of matter described as pure carbon in the form of wool-like fibers.

Alex W. Spears, Jr., has been named sales and service representative for **Mount Hope Machinery Co.** His territory will be Alabama, western Tennessee, Louisiana, Mississippi, Arkansas, Texas, and Oklahoma. His headquarters will be in Mobile, Ala.

Neil G. Corbett has been appointed district manager of the Atlanta sales office of the **International Salt Co.**

Knitting Machine & Supply Co. is occupying new quarters at 3710 Hudson Ave., Union City, N. J. The move was designed to consolidate warehouse, office, and machine shop facilities at one location.

Hyster Co. has reorganized sales territories and consolidated district sales areas into four geographical regions. Regional managers are: John B. Hall, eastern regional manager; Jack Greer, midwest regional manager; Donald Shaffer, western regional manager; and Robert W. Hill, southern regional manager.

William E. Jennings has resigned as manager of the fiber application laboratory of National Aniline Div., **Allied Chemical & Dye Corp.** He has returned to the textile consultation business. * * * Carl O. Kingsbury has retired as New Orleans Sales Branch Manager for Allied Chemical's Solvay Process Div., a position he has held for 21 years. He is succeeded by Charles E. Varn, who has been a salesman at Solvay's Charlotte, N. C., sales branch.

Union Carbide Chemicals Co. has appointed F. J. Seider manager of general services. In addition to retaining over-all supervision of the general sales office, he will act as the clearing house for agent and reseller affairs as they apply to the New York office. J. N. Falkinburg replaces Mr. Seider as manager of the general sales office. He will also be responsible for the contract department. J. M. Sartorius and J. P. Galaba have been appointed assistant managers to aid Mr. Falkinburg in the operation of his department.

AMERICA'S SPRING STEEL DISTRIBUTOR

We have had over fifty years experience furnishing steel for both builders of TEXTILE MACHINES and makers of replacement parts for KNITTING MACHINES.

Modern Slitting and Shearing Equipment

WARD STEEL CO.

87-G RINDGE AVE. EXTENSION
CAMBRIDGE 40, MASS.

PHONE—
UNIVERSITY 4-2460

Mr. Frischkorn
Cleveland Crane

Mr. Schlaeppi
Ciba Co.

Mr. Lamendola
Sun Chem. Corp.

Mr. Stuart
Sou. Loom Dev.

John G. Frischkorn, Jr., has been named sales manager of the Cleveland Tramrail Division of **The Cleveland Crane & Engineering Co.** He succeeds A. F. Anjesky, who has retired after 38 years of service with the company.

Willcox & Gibbs Sewing Machine Co. has elected Arthur Miller to the post of vice-president in charge of sales. He was formerly general sales manager.

Yale & Towne Manufacturing Co. has elected Elmer F. Franz to the post of vice-president and treasurer. John A. Baldinger, advanced to vice-president at the same time, will continue to serve in Philadelphia as general manager of the materials handling division.

Ciba Co., Inc., has promoted Fernand Schlaeppi to the newly-created post of technical manager of the New England district, with offices in Rumford, R. I. The move was made to strengthen and expand Ciba's technical service. * * * Theodore B. Manheim has been appointed to the new post of supervisor of chemical specialties sales. He is responsible for market research and sales of Ciba's textile processing products.

C. Chester Bassett, Jr., has been appointed vice-president of the Hartford Rayon Div., **Bigelow-Sanford Carpet Co.** He was previously vice-president for sales, American Enka Corp.

William B. Schoenborn has joined the sales staff of **Carlisle Finishing Co.** with headquarters in New York City. Prior to joining Carlisle, he was representative for United Piece Dye Works.

Celanese Corp. of America has constructed a new manufacturing unit at its Belvidere, N. J., plant to produce polyvinyl acetate emulsions. Annual capacity of the installation is said to be in excess of 20 million pounds.

James W. Stuart has joined the **Southern Loom Development Co.,** Greenville, S. C., as vice-president and general manager. Mr. Stuart has acquired a financial interest in the company, which manufactures and markets among other items the Hunt let-off for looms. He was previously vice-president in charge of sales for Pneumafil Corp.

Charles A. Lamendola has been appointed technical sales representative of the Warwick Chemical Div. of **Sun Chemical Corp.** He will be calling on dyeing and finishing plants throughout the New England area.

Charles S. Tanner Co. has purchased land in Greenville, S. C., to serve as the site for a warehouse and plant. The building will be equipped with a railroad siding and all modern facilities. It will house suitable offices, laboratory, and plant facilities which will put the company in a position to manufacture in the South many of the products which have been heretofore manufactured in New England.

Walter Stump has assumed new duties as leader of the dyeing and finishing group of the technical sales service department of **The Chemstrand Corp.**

John H. Bolton, Jr., vice-president and director of sales of **Whitin Machine Works,** has been elected to the board of directors. Other directors elected were E. Kent Swift, J. Hugh Bolton, Murray W. Keeler, Phillips Ketchum, Sydney R. Mason, Gordon G. Spence, E. Kent Swift, Jr., and Orrin G. Wood.

Arthur C. Emelin has succeeded Harold E. Smith as chief executive officer of the **Wallerstein Co.** The post was vacated when Mr. Smith was elected chairman of the board.

George A. Stanley has been assigned to the New York textile fiber

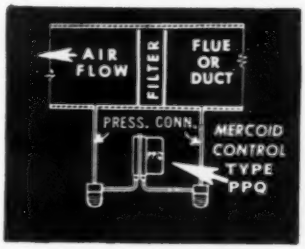
EXTREMELY
"Sensitive"
DIFFERENTIAL PRESSURE
Control
BY
MERCOID®

Has Hermetically Sealed
Magnetic Mercury Switch

FOR AIR OR GAS
(INCHES OR FRACTION OF INCHES OF WATER)

For low pressure or vacuum—to "make" or "break" electrical circuits on small changes in the difference between two pressures. Examples: to indicate a change in resistance through a filter (see illustration); to indicate a change in differential due to a change in air flow conditions; to indicate interruption of air flow.

This control incorporates two pressure chambers separated by a sensitive diaphragm. Each chamber is connected to a separate pressure source and the control is set to operate as the relationship of the two pressures change.



OPERATING RANGES—6" vacuum to 6" pressure (sensitivity .03") and 30" vacuum to 30" pressure (sensitivity .1" to .2").

CIRCUIT ARRANGEMENTS—several models available to accomplish the following operations:

SPST—USING ONE MAGNETIC SWITCH—open or close switch contact either on an increase or decrease at pressure difference.

SPST—USING TWO MAGNETIC SWITCHES FOR TWO STAGE OPERATION. Open/close both switch contacts on an increase in pressure difference.

Open one contact on increasing pressure difference and one on decreasing pressure difference.

Close one contact on increasing pressure difference and one on decreasing pressure difference.

CASE STYLES—three types to meet following conditions: Indoor (general purpose), Outdoor (weather resistant), and Hazardous locations (explosion-proof).

WRITE FOR BULLETIN No. 14N

THE MERCOID CORPORATION
4211 Belmont Ave., Chicago 41, Ill.

MORTON

AUTOMATIC BALL-BEARING LOGGERHEAD

This ball-bearing loggerhead is designed to relieve excessive strain thrown against the head by unlocking it, thus preventing a breakdown.

It will increase picker room production. It will eliminate shut-downs. It will prevent stretched laps because of its ball-bearing, friction-free rollers.

Immediate delivery — guaranteed satisfaction!

MORTON MACHINE WORKS INC.

COLUMBUS, GA. U. S. A.

AVOID SPINNING ROOM DISRUPTION!

There are many, many reasons and causes for machine failure presenting the costly problem of "Down-time". Some of these every day problems are unforeseen - - - BUT

the foresight of . . .
ANDERSON SHIELDS
will reduce . . .
CHIPPING — SPLITTING
BREAKING
of your . . .
SPOOLS AND BOBBINS

TEXTILE SHIELD CO., INC.
LAWRENCE MASS., U. S. A.

SUPPLIERS News — WHAT THEY ARE DOING

sales office of **Dow Chemical Co.** He will work in the merchandising section.

Harry R. Kennedy has been promoted to sales engineer by **Universal Winding Co.** His headquarters will be in Charlotte, N. C., and most of his

Mr. Kennedy

Mr. Canning

contacts will be with mills in South Carolina. * * * Russell M. Canning has been named to the position of manager of Unifil technical services section, replacing Mr. Kennedy.

Cleaver-Brooks Co. has broadened its sales organization by the formation of five sales districts, providing greater concentration of sales control within five major geographical areas. R. W. Watson manages Milwaukee district, Frank R. Goulding heads the Atlanta area, R. E. Costin manages the Dallas area, and W. B. Stoehr the San Francisco area. The New York area sales manager has not been named.

Geigy Dyestuffs div. of **Geigy Chemical Corp.** is issuing a guaranty to mills applying Mitin mothproofer to all-wool or wool-blended fabrics. The guaranty applies also to mills using commission dyers for application of the mothproofer.

Ralph Gossett and Co. has appointed Harris Ford as sales representative. His territory will be the state of South Carolina and his headquarters will be in Greenville, S. C. * * * Don C. O'Hair is now representing Ralph Gossett and Co. in North Carolina and Virginia. Mr. O'Hair's headquarters are Charlotte, N. C.

The Charlotte, N. C., district sales office of the boiler division of **Babcock & Wilcox Co.** has been moved to 1100 Wachovia Bank Bldg., 129 Trade St. The office serves the states of North and South Carolina.

CLASSIFIED

Check Tensions in Yarns, Cords, Rubber
Quick Trigger Action
SAXL TENSION METER
Tensitron, Inc., Harvard, Mass.

BOBBINS—BOBBINS—BOBBINS

Our specialty is good used automatic loom bobbins. We also deal in twister and roving bobbins. Send us samples of what you need or what surplus bobbins you have.

CHARLES G. STOVER COMPANY
West Point, Georgia

FOR SALE AT LOW SACRIFICE PRICES

- Two Mudrick Vertical Openers with 25 H.P. Motors. Designed to Open Most Vegetable and Animal Fibers.
- One Mudrick F-6 Picker—10 H.P. Motor
- Three Atlas Type Pickers
- Two Mudrick 15 H.P. Blowers
- Two Mudrick Condensers
- Various Other Types of Fans, Balers, etc.

Write for full details to:

ARKIN HAIR & MOSS CO.
57 E. 16th St.
Chicago 16, Ill.

TECHNICAL WRITER

THE CHEMSTRAND CORPORATION—producer of Acrilan* Acrylic fiber and Chemstrand Nylon — is seeking a technical writer for its Technical Sales Service Department with headquarters in Decatur, Alabama.

Qualifications: Bachelor degree in textile chemistry or textile engineering from an accredited institution and subsequent experience in the textile trade, including technical writing and preferably textile processing and/or dyeing and finish work. Staff work for a textile trade publication desirable.

Assignment: Responsibilities will include preparation of technical bulletins and provisions of other informational services for technical sales service operations. Individual selected will become a member of an energetic, progressive activity that has played a vital role in Chemstrand's advancement to a position of leadership in the chemical textile fiber field.

Excellent employee benefits and working conditions. Pleasant living and recreational conditions provided by location in the Tennessee Valley. Salary commensurate with academic training and experience.

Prompt and confidential consideration will be given resumes of education and experience, indicating salary background, sent to: Mr. A. D. Preston, Technical Personnel Manager, Box TS-1.

The Chemstrand Corp.
Decatur, Alabama

Executive Views

(Continued from page 81)

what "rowey cloth" actually did mean. Finishing said it was uneven weave and blamed manufacturing; manufacturing blamed finishing and produced the grey inspection sheets to prove it. But when inspected by manufacturing supervisors, the finished pieces did look uneven!

While counter charges of poor dyeing, poor desizing and poor scouring were being tossed around, the defect cleared. As it disappeared almost in its entirety, it was vaguely admitted to be a finishing defect. A total of approximately 260 pieces had been tagged with "rowey cloth," and by a strange coincidence approximately 260 pieces made a batch for desizing and scouring!

Now in those days it wasn't easy for manufaeturing supervisors to get information from finishing supervisors, and vice versa. Passing the buck was a game at which many worked hard, and it is to be noted that today this objectional course of the olden days is swiftly disappearing. Everyone has a stake in quality. At a plant conference of supervisors, it was brought out that one finishing supervisor had never set foot in the manufacturing division—and he had worked at the plant for over twenty-five years! When a full check was made, it was practically the same story; most of the supervisors of one division didn't know the processes of the other—in fact had never seen them! This was soon corrected by guided tours.

We would like to point out that we escort foreign groups through our mills on guided tours (we have on many occasions) and explain every process to them. They are vitally interested and take many notes and ask many questions. Charity begins at home so let's do the same for our own—and first!

BUT to get back to "rowey cloth." No one seemed to know where this word "rowey" originated, but finishing had been using it for years and it must have meant a defect other than uneven weave, because "uneven weave" was listed on the Second Sheet as such. We are sure that we know now what it means, after the ado we went through. However, we can't find this word in any of our dictionaries.

There is no doubt that we need a comprehensive textile defects dictionary, replete and complete with the origin of defect names and defects, but we admit the task of compiling such a dictionary would be a most difficult one. We'll probably have to go along with what we have, and "When in Rome speak as the Romans speak"—"Rowey Cloth," "Gouts," "Snakebellies!"

Now is probably a good time to check the Second Sheet again, the names and defects.

Need Information?

SEE "HOW OTHER MEN MANAGE" IN EVERY ISSUE OF TI . . .

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.
Address: Editors "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

W. R. C. Smith Publishing Co.
Dept. T-12A
806 Peachtree St., N. E.
Atlanta 8, Georgia

Please enter / renew my subscription to TEXTILE INDUSTRIES for two years.

Name _____
Title _____
Company Name _____
Address _____
City _____
State _____

☐ Enclosed find $3.00 (U.S.A.) ☐ Bill me for $3.00 (U.S.A.)

(Foreign Rates on Request)

ADVERTISER'S INDEX

A

Acme Steel Company 18
Advertising Council, Inc. ..... *
Alco Oil & Chemical Corporation 200
Aldrich Machine Works 29
Allen Sons Wm. Co., Div., O. G. Kelley & Co. ..... *
Allied Chemical & Dye Corp. — Nitrogen Div. ..... *
American Air Filter Co. ..... *
American Associated Consultants, Inc. ..232
American Cancer Society ..... *
American Lava Corp. ..... *
American Moistening Co. ..... *
American MonoRail Co., Inc. 96
American Red Cross ..... *
American Viscose Corp. 130-A
Anderson-Clayton Co. 242
Andrews & Goodrich Division 118, 119
Anheuser-Busch Incorporated ..... *
Antara Chemicals, General Aniline & Film 44
Armstrong Cork Co. 46, 47
Arnold, Hoffman & Co. ..... *
Ashworth Bros., Inc. 166
Askania Regulator Co. ..... *
Atkinson, Haserick & Co. ..... *
Atlanta Belting Co. 190
Atlantic Steel Co. 226
Avondale Mills, Inc. 198

B

Bahnson Co. ..... *
Barber Colman (Textile Div.) 78
Barco Manufacturing Co. ..... *
Barrell Co., Inc., Wm. L. 132
Becco Chemical Division 13
Bemis Brothers Bag Company 124
Bendix Aviation Corporation (Eclipse Machine Division) ..... *
Bijur Lubricating Co. ..... *
Birch Bros., Inc. 136
Booth Co., Benjamin 56, 57
Borne Chemical Co. ..... *
Branson Company ..... *
Broad Street Machine Co. 130
Buffalo Forge Co. 162
Buffalo Pumps, Inc. ..... *
Butterworth & Sons, Co., H. W. ..... *

C

Caledonian Dye Works ..... *
Candlewick Yarn Company 125
Carbic Color & Chemical Co., Inc. 19
Carrier Corporation ..... *
Carter, Inc., A. B. ..... *
Celanese Corp. of America & Subsidiary Cos. ..... *
Chemstrand Corporation (Acrilan) ..... *
Ciba Company, Inc. ..... *
Classified Ads 238
Clayton Co., J. M. ..... *
Cleveland Tramrail Division, The Cleveland Crane & Engr. Co. ..... *
Clinton Corn Processing Co. ..... *
Clipper Belt Lacer Co. 32
Cobble Bros. Mchy. Co. 138
Cocker Mach. & Fdry. Co. 52
Cole Co., R. D ..... *
Colgate-Palmolive Co. ..... *
Colton Chemical Co. ..... *
Corn Products Sales Co. 38
Courtaulds 82
Curlator Corp. (Textile Div.) ..... *
Curtis & Marble Machine Co. 40

D

Dalton Carpet Coating Co., Inc. 134
Dalton Carpet Finishing Co., Inc. 134
Dalton Group, The 134
Dalton Sheet Metal Co. 136
Dalton Spread Laundry, Inc. 134
Darnell Corp., Ltd. 230
Dary Ring Traveler Co. ..... *
Davidson-Kennedy Co. ..... *
Davis & Furber Mach. Co. ..... *
Dayton Rubber Co. 42, 43
Denman Textile Rubber Div. ..... *
Deublin Company 207
Diehl Mfg. Co. ..... Second Cover
Dixie Bearings, Inc. 35
Dobeckumn Co. 111
Dodge Mfg. Corp. 80
Dommerich & Co., L. F. ..... *
Dow Chemical Company 164
Draper Corporation 1
Dronsfield Bros., Ltd. 202
Du Pont de Nemours & Co., Inc., E. I. (Dyestuff Div.) 208-A
Du Pont de Nemours & Co., Inc., E. I. (Electrochemicals Dept.) ..... *
Du Pont de Nemours & Co., Inc., E. I. (Finishes Div.) 227
Du Pont de Nemours & Co., Inc., E. I. (Textile Fibers Div.) 58, 59
Duraclean Dealers of America 127
Durant Mfg. Co. 228

E

Eaton Mfg. Co. ..... *
Emkay Chemical Company 134
Eriez Co. 15
Esso Standard Oil Co. ..... *
Exact Weight Scale Co. ..... *

F

Fabulized, Inc. ..... *
Fafnir Bearing Co. ..... *
Fairbanks, Morse & Co. 11
Fairtex Corporation ..... *
Fancourt & Co., W. F. 177
Felters Company 22
Felton & Son Co., S. A. ..... *
Ferguson Gear Co. 203
Fidelity Machine Company 186
Fife Manufacturing Co. 74
Finetex, Inc. ..... *
Finnell System, Inc. 170
Firestone Tire & Rubber Co. 129
Fisher Mfg. Co. ..... *
Fletcher Works, Inc. ..... *
Foster Machine Co. 39
Foxboro Company ..... *
Franklin Process Co. 116
Fulton Bag & Cotton Mills 122

G

Garland Manufacturing Co. ..... *
Gaston County Dyeing Machine Co. 235
Gastonia Textile Sheet Metal Works ..... *
Gates Rubber Co. ..... *
Gaylord Container Corp., Div. of Crown Zellerbach Corp. ..... *
Geigy Chemical Corporation Geigy Dyestuffs Div. 133
General Dyestuff Corp. ..... *
General Latex & Chemical Corp. 130B
General Radio Co. 172
Georgia-Carolina Oil Co. ..... *
Gessner Co., David 192
Goodrich Chemical Co., B. F. 70
Goodyear Tire & Rubber Co., Inc. (Chemical Prod.) 5
(Industrial Prod. Div.) ..... *
Guider Specialty Co. ..... *
Gulf Oil Corp. ..... *

H

Hart Products Corp. ..... *
Hartford Machine Screw Co. ..... *
Hayes Industries, Inc. ..... *
Herr Mfg. Co. ..... *
Hickory Spinners, Inc. 134
Houghton & Co., E. F. 191
Howard Bros. Mfg. Co. 60
Hubinger Co. ..... *
Huebsch Mfg. Co. 113
Hunter, Inc., James ..... *
Hunter Machine Co., James 36
Hyatt Bearing Division ..... *

I

Industrial Rayon Corp. ..... *
International Salt Co. ..... *
Intertex Corporation ..... *

J

Jacobs Northern Div., E. H. 34
Jenkins' Sons, Inc., M. W. 234
Johnson Bronze Co. 202
Johnson Corp. 41

K

Kali Manufacturing Co. 204, 205
Keever Starch Company 168
Kemp Mfg. Co., C. M. ..... *
Kennett Materials Handling Division National Vulcanized Fibre Co. ..... *
Kidde Textile Mchy. Corp. 189
Koppers Company, Inc., Chemicals & Dyestuffs Div. 17

ADVERTISER'S INDEX

L

Lane & Bros., Inc., W. T. 201
Laurel Soap Mfg. Co. 199
Lee Company, Inc., The L. A. 132
Lestershire Spool Division
National Vulcanized Fibre Co. 8
Lockwood Greene Engineers 194
Looper Co., Glenn 130
Loper Co., Ralph E. 239
Ludell Mfg. Co. 62

M

Maguire & Co., Inc., John P. ..... *
Marshall & Williams Corp. ..... *
McCandless Corp., The ..... *
McDonough Power Equipment, Inc. 230
McKiernan Terry Corporation 49
Meadows Mfg. Co. ..... *
Meese, Inc. 50
Mercoid Corporation 237
Merrow Machine Co. ..... *
Metlon Corporation 115
Metro-Atlantic Chem. Co., Inc. ..... *
Micro Switch Division 64
Miller Corporation, Harry ..... *
Milton Machine Works 229
Minnesota Paints, Inc. ..... *
Monsanto Chemical Co. 53
Monticello Bobbin Co. 190
Moretex Chemical Co. ..... *
Morton Machine Works 238
Morton Salt Co. ..... *
Mount Hope Machy. Co. 24
Muller, Messrs. Franz 20
Mutual Chemical Division
Allied Chemical & Dye Corp. ..... *

N

Nash Co., J. M. ..... *
National Aniline Division
Allied Chemical & Dye Corp. 31, 51
Fibers Dept. 114
National Business Publications, Inc. ..... *
National Ring Traveler Co. 30
National Starch Prod., Inc. 21
National Vulcanized Fibre Co. 8
Naugatuck Chemicals Div. ..... *
New Departure Div. ..... *
New York & New Jersey Lubricant Co. .. 231
Nitrogen Division, Allied
Chemical & Dye Corp. ..... *
Nopco Chemical Co. 72

O

Oakite Products, Inc. 206

P

Pabst Brewing Co. 224
Parks-Cramer Co. 25
Pa terson-Kelley Co., Inc. ..... *
Penick & Ford, Ltd., Co. 45
Perfecting Service Company 228
Perkins & Sons, Inc., B. F. 16
Piedmont Cotton Mills 120
Pittsburgh Corning Corp.
(Foamglas Div.) 208
Pneumafil Corporation ..... *
Pocono Fabricators, Inc. 33
Portland Company ..... *
Powell Valves ..... *
Procter & Gamble Distributing Co. 76
Proctor & Schwartz, Inc. 131

R

Red-Ray Manufacturing Co., Inc. 136
Reiner, Inc., Robert ..... *
Reliance Elec. &
Engineering Co. ..... Front Cover
Revonah Spinning Mills 128
Reynolds Metals Co. 137
Ridge Tool Company 50
Riggs & Lombard, Inc. ..... *
Robbins & Myers, Inc. ..... *
Robert & Co., Associates, Inc. 123
Roberts Co. 7
Ross Engr. Corp., J. O. 118, 119
Royce Chemical Co. ..... *

S

Saco-Lowell Shops 175, 176
Sandoz, Inc. 61
Sargent's Sons Corp., C. G. 14
Scheer Co., Inc., Geo. ..... *
Scholler Brothers, Inc. 100
Scott Testers, Inc. ..... *
Scott & Williams, Inc. ..... *
Semet-Solvay Petrochemical Div.,
Allied Chemical Corp. 225
Seydel-Woolley & Co. 27
Sheffield Corp. ..... *
Simco Company ..... *
Sims Metal Works ..... *
Sinclair Refining Co., Inc. 65
Sirrine & Co., J. E. 233
Smith Textile Apron Co. 206
Solvay Process Division, The
Allied Chemical & Dye Corp. 63
Sonoco Products Co. 135, 223
Southern Airways Co. 68
Southern Machine Company 109
Southern Shuttles Div. 37
Southern States Equip. Corp. 12
Staley Mfg. Co., A. E. 48
Standard Brands, Inc. 66
Standard Chemical Prod., Inc. 28
Standard Oil Co. (Kentucky) ..... *
Stauffer Chemical Co. 23
Steel Heddle Mfg. Co. 37
Stein, Hall & Co., Inc. ..... *
Stowe-Woodward, Inc. 26
Summerville Manufacturing Co. 132
Super Tufter, Inc. ..... Third Cover

T

Taylor Co., Halsey W. ..... *
Taylor Instrument Companies 54, 55
Tennant Co., G. H. ..... *
Tennessee Corp. 190
Ten-Tex Corporation 117
Terrell Mach. Co., Inc. ..... *
Testworth Laboratories ..... *
Texas Co. 2
Textile Banking Co. 126
Textile Industries 6
Textile Machine Works 182
Textile Shield Co., Inc. 238
Textile Shops ..... *
Thomaston Mills 204
Ton-Tex Corp. ..... *
Torrington Co. 180
Truscon Laboratories 10
Trust Company of Georgia 75
Turbo Machine Co. ..... *
Tyer Rubber Company ..... *

U

U. S. Ring Traveler Co. 205
Universal Winding Co. 221

V

Veeder-Root, Inc. ..... Fourth Cover
Victor Ring Traveler Co. ..... *

W

Wallerstein Co., Inc. ..... *
Want Ads 238
Ward Steel Company 236
Warner & Swasey Co. 121
Watson & Desmond 195
West Point Fdy. & Mach. Co. 208-B
Westinghouse Electric Corp.
Apparatus Division ..... *
Whitehead Die Casting Co. ..... *
Whitin Machine Works 9
Whitinsville Spinning Ring Co. 207
Wicaco Machine Corp. 196
Wildman-Jacquard Co. 178
Wonalancet Company ..... *
Wyandotte Chemicals Corp. 197

Y

Young Machine Co., F. A. 219

wherever you are

COTTON

is part of the picture

When the family steps out in its Sunday best, cotton is very much a part of the picture. It leads in popularity for smart Spring dresses, for men's shirts, for crisp little-boy suits, for adorable little-girl ruffles.

Cotton's versatility makes it equally adaptable to sheer, dainty fabrics for feminine fashions or smart, sturdy men's wear. And the new cottons are so easy to care for that they're a joy to own.

Indoors or out, at work or play, cotton is part of the fashion picture, because it looks smart, washes easily, wears well, is cool, comfortable and economical.

All day, every day, you depend on cotton.

ALL THESE ARE COTTON

Father's shirt
Father's wash 'n wear suit
Boy's suit
Children's sox
Mother's dress
Gloves
Flower ornament
Hand-bag
Girl's dress

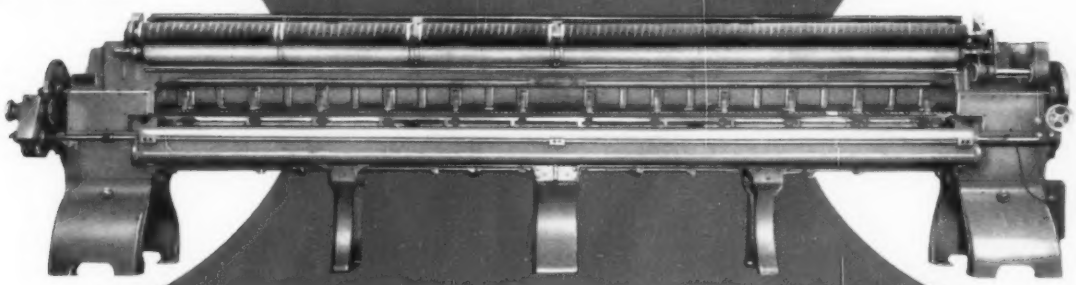
COTTON AND COTTONSEED PRODUCTS
ACCO

ANDERSON, CLAYTON & CO.
(INCORPORATED)

HOUSTON • ATLANTA • BOSTON • LOS ANGELES • MEMPHIS • NEW ORLEANS • NEW YORK

ANOTHER FIRST IN SUPER TUFTERS!

DIAL CONTROLLED



THE NEW MODEL 228-DT DIAL TYPE YARDAGE-CARPETING MACHINE

Tufts Material to a maximum width of 228 inches.

THE NEW 228-DT POWER TUFTER PRESENTS THE NEWEST ADVANCES IN TUFTING MACHINES WITH THESE OUTSTANDING ADVANTAGES...

- Lets you change the stroke of the needles—*without changing cams, without any extra re-adjustments!*
- Lets you change pile height—*without shimming needle plates!*
- Lets you change the stroke of the loopers and knives—*without any extra re-adjustments!*
- Cuts "Change" time from hours to mere minutes!

The new Model 228-DT Super Tufter, as well as other models, can be equipped with our new CUT-PILE PATTERN ATTACHMENT enabling you to produce cut and loop pile selectively in the same row of stitches. Sample swatches of tufted goods, plain or pattern design, are yours on request.

You are cordially invited to see the new 228-DT and other models at our Fort Oglethorpe Plant.

Super Tufter

MACHINERY COMPANY, INCORPORATED

FIRST AVENUE NORTH — FORT OGLETHORPE, GEORGIA, U.S.A.

Phone CAnal 2-8311 — Cable Address "SUTUF"

These modern Veeder-Root Counters are "Big Wheels" in any mill's Cost-COUNTrol System

These Reset Lineal Measuring Counters are in world-wide use on inspection tables, in cloth rooms, on slashers . . . and on warpers, tenter frames, calenders and other equipment in weaving and knitting mills. Counter is accurately geared to one-foot-circumference wheels which may be smooth faced as shown . . . or knurled, grooved or rubber-faced. Rugged, accurate and easy to read, these counters run on any type and width of material . . . recording in feet, yards, meters, or other units. With them in your mill, you always have up-to-the-minute production and inventory figures at your command.

This is one of the many types of counters in the complete Veeder-Root textile line, available promptly from either Hartford or Greenville. What are your present counter needs? It's a smart time to order, *right now.*

VEEDER-ROOT INC.

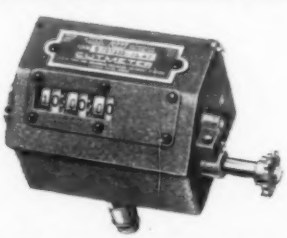
HARTFORD 2, CONN. • GREENVILLE, S. C.

Southern Headquarters in Greenville, S. C.

Hartford, Conn. • Greenville, S. C. • Altoona, Pa. • Chicago • New York
Los Angeles • San Francisco • Montreal • *Offices and Agents in Principal Cities*

Veeder-Root makes ALL TYPES of Textile Counters...

Hand-operated Vary-Tally, a multiple-unit reset counter for use in inspection, stock Countrol, etc.



Loom Cut Meters, for Countrolling cuts of cloth to predetermined lengths.

2-3-4 Shift Pick, Hank, Yardage and Knitting Machine Counters.